

Starfruit leaves as glucose absorption inhibitor in Mice's small intestinal epithelial cells

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Abstrak

Background: Starfruit (*Averrhoa carambola*) leaves contain flavone derivatives that exhibit anti-hyperglycemic effects. This study aims to determine the effect of starfruit leaves in reducing glucose absorption in intestinal epithelial cells of mice. Methods: This study was done by performing perfusion on the small intestines of mice. The mice that were used in this study were divided into four groups. The control group was given glucose solution without infused starfruit leaves whereas, the remaining 3 groups were given 3 mmol (540 mg/dL) glucose solution with infused starfruit leaves of varying concentrations; 200, 400, and 600 mg/kg. Samples were collected at 0, 15th, 30th, 45th, and 60th minute. The sample was tested for glucose levels using spectrophotometry. Results: Test of significance showed a significant difference between the control group and the test group with $p < 0.05$. Conclusions: Starfruit leaves have a reduction effect towards glucose absorption in the small intestines in Wistar strains where the group using 600 mg/kg of infused starfruit leaves have the most significant effect as compared to other groups.