

INVESTIGATION OF THE MECHANISM OF ACTION OF GARCINIA KOLA (BITTER KOLA) AS AN ANTIDIABETIC

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ABSTRACT

Evaluation of the mechanism of action of Garcinia kola (Bitter kola) as an ant diabetic. Diabetes mellitus is the seventh leading cause of death in the United States and it is now a worldwide epidemic. Currently available drugs are expensive and have side effects that can compromise compliance in patients. There is an urgent need to introduce drugs that are effective and that have less troublesome side effects. The objective of this study was to examine the antidiabetic activity and mechanism of action of Garcinia kola seed used traditionally to treat diabetes. Garcinia kola was evaluated for its ability to inhibit alpha-glucosidase as a possible mechanism of action. In vitro method was used and alpha-glucosidase from two sources, Bacillus stearothermophilus, and Saccharomyces cerevisiae were used. The alpha-glucosidase was exposed to different concentrations of aqueous extracts of Garcinia kola (bitter kola). Our results indicate that Garcinia kola inhibited alpha-glucosidase from the two sources, an indication that it acts like acarbose (that is already marketed for the treatment of diabetes) and may be useful in treating hyperglycemia.

KEYWORDS: *Diabetes, Alpha-Glucosidase, Medicinal Plants, Mechanism of Action*

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