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Evaluation of *in vitro* antidiabetic efficacy of physalis angulata fruit extracts

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Background: The intestinal digestive enzymes alpha-glucosidase and alpha-amylase are plays a vital role in the carbohydrate digestion. Plant based medicaments are extensively used for the treatment of various ailments of human beings.

Objective: The aim of the present study was to investigate the *in vitro* anti-diabetic activity of the methanolic extract of *Physalis angulata fruits.*

Methods: Plant material was subjected to sequential extraction by maceration method by using different solvents. Antidiabetic activities of *Physalis angulata* fruit extracts were evaluated using inhibition of alpha amylase and alpha glucosidase enzymes.

Results: The assay results suggests that the extract exhibit the dose-dependent increase in inhibitory effect on alpha glucosidase enzyme (upto 82.52%), and alpha-amylase enzyme (upto 94.6%). The current study proves that the antidiabetic activity of extract of *Physalis angulata* fruits by *in vitro* studies.

Conclusion: From the data obtained in the current studies, it was observed that the fruit extracts of *Physalis angulata* showed prominent antidiabetic properties by *in vitro* and further the studies can be need to carried out for isolation of active principle responsible for activity.

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