

HYPOGLYCEMIC EFFECT OF *CATHARANTHUS* EXTRACTS ON SPRAGUE-DAWLY RATS.

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In Ayurvedic medicine indigenous plants such as kothalahibutu, bitter guard, mini-mal etc. are used as hypoglycemic agents in treating diabetes mellitus. Previous studies have tried to prove or disprove the effectiveness of some of these plants in treating the above endocrine disorder. The current study was performed to examine the hypoglycemic effects of mini-mal or patti-poo (*Catharanthus roseus*) in Sprague-Dawly rats. This plant, originally described from Madagascar, grows to 75cm high and is profusely branched with the stems containing milky latex. The colors of the flowers vary, being either white with yellow/crimson eyes or lavender pink with crimson eyes.

The *Catharanthus* extracts were made by homogenizing 50g of entire plant and mixing with 400ml of distilled water, which was then concentrated to 50ml. The homogenate was filtered and kept at 4°C until used. Ten to twelve weeks old male Sprague-Dawly rats were used as the animal model. These rats grouped in to three categories (experimental group, positive control group, and negative control group), were starved for 16hrs and the blood glucose levels were measured. Each group was given 2ml 50% dextrose and either 1.5ml of the *Catharanthus* extraction, 0.7mg of Glibenclamide, or 1.5ml water respectively. The oral glucose tolerance test was performed on each rat at 1 hr intervals for 4 hrs.

The mean blood glucose levels of the experimental group were lower than the negative control group, however, the reduction was not statistically significant (Student's t test $r < 0.001$). The mean blood glucose values of the positive control group were significantly lower than the negative control group. The low blood glucose levels observed in the experimental group indicate possible hypoglycemic properties of *Catharanthus* extractions. However the small number of subjects used in the experiment may have hindered the statistical significance. Moreover this experiment shows that the Sprague-Dawly rats could be used as an animal model to study the hypoglycemic effects of the *Catharanthus* extractions.

