ORAL HYPOGLYCAEMIC ACTIVITY OF ASTERACANTHUS LONGIFOLIA

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Investigations were carried out to evaluate the ability of the medicinal plant Asteracanthus longifolia of the family Acanthaceae, to function as an oral hypoglycaemic agent.

An aqueous decoction of this plant (the whole plant) was investigated for its ability to lower the fasting blood glucose level and improve the glucose tolerance in male Sprague Dawley rats. During the investigations, the Asteracanthus treated animals were always compared with a control group receiving an equal dose of distilled water.

The oral administration of the normally recommended therapeutic dose of the plant extract (5.0 g/Kg body weight) to the rats resulted in a 31% decrease in their fasting blood glucose levels. This compared favourably with the 35% decrease in fasting blood glucose level mediated by a therapeutic dose (15 mg/Kg body weight) of the well known hypoglycaemic agent tolbutamide, The magnitude of the hypoglycaemic effect of the plant extract was found to vary with the dose administered and the storage time of the prepared extract.

The glucose tolerance of the experimental animals was also markedly improved by the plant extract. In the control group of animals receiving distilled water (1ml/100g body weight), followed 0.5 hours later by an oral dose of glucose (5g/Kg body weight) there was a peak increase in blood glucose concentration (65%) observed between 1-2 hours after glucose administration. In animals receiving the plant extract 0.5 hours before the glucose load, only a 38% peak increase in blood glucose level was observed.

The present study provides supportive scientific evidence for the view that Asteracanthus longifolia possesses hypoglycaemic properties.

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