

In Vivo Antidiabetic Effects of Aqueous Methanolic Bark and Leaf Extract of *Dolichandrone atrovirens*

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INTERNATIONAL CONFERENCE ON RECENT TRENDS IN HUMANITIES AND SCIENCE 2018, 'ICRTHS-2018'.

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26TH OCTOBER 2018.

American J of Bio-pharm Biochem and Life Sci 2014 December, Vol. 6: OP12

ABSTRACT

The objective of the study was to investigate the in vivo antidiabetic effects in the aqueous methanolic extract of bark and leaf part of *Dolichandrone atrovirens*. The animals were separated into five groups and each group has six number of Wister rates and a total number of 30 Wister rats (24 diabetic surviving rats, 6 normal control rats) were used. Antidiabetic potential of leaf and bark extracts of *Dolichandrone atrovirens* was studied with Streptozocin - Nicotinamide injected type II diabetic model. Estimate the effect of Dolichandrone atrovirens leaf and bark extract on body weight (g.), Serum glucose level (mg/dL), haemoglobin, glycosylated haemoglobin (HbA1C) and total protein level of normal and diabetic rats. The increased body weight, decreased blood glucose, glycosylated haemoglobin and other biochemical parameters level were observed in diabetic rats treated with bark and leaf extract of *Dolichandrone atrovirens* compared to diabetic control rats. The diabetic rats treated with both parts of the plant extracts were produced the significant reduction in blood glucose level. This indicates the bark and leaves part of the plant extract was able to possess the ability to manage glucose level as well as controlling muscle wasting. In conclusion, the present study clearly demonstrates that the *Dolichandrone atrovirens* leaf and bark extract the lowering blood glucose action in diabetic condition. Further, unambiguous mechanisms and sites of these activities and isolation of active constituent of the extract are still to be determined.