In vitro and in vivo studies on anti-diabetic potential of the stem of Acalypha indica Linn. Priya CV, Bhaskara Rao KV.

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ABSTRACT

Diabetes mellitus is a chronic metabolic disorder leading to the raise in blood glucose level resulting in several complications effecting over 346 million people worldwide. Post pandrial hyperglycemia is one of the leading complications of Diabetes mellitus which can be regulated by α -Glucosidase inhibitors. Phytomedicine is well thought to be low toxic and with no side effects. Ethanobotanical studies reveal that over 800 species of medicinal plants are reported to have antidiabetic potential. Acalypha indica (Euphorbiaceae) commonly known as Kuppaimeni is a weed plant growing as an annual herb throughout the Plains of India and traditionally used as a medicine for diabetes. In this study, the aqueous extract of A. indica stem was examined for in vitro and in vivo antidiabetic activities. At a dose of 10 mg/ml, aqueous extract showed 96.6% inhibitory effect on α -Glucosidase in vitro. In vivo antidiabetic activity was carried out in Streptozotocin induced diabetes in Swiss albino rats. Oral administration of aqueous extract at 300 mg/kg body weight reduced blood glucose level by 63.5% in Streptozotocin induced diabetic rats. With all these results we can conclude that aqueous extract of Acalypha indica stem is an effective antidiabetic agent and gives a hope to use herbal medicine as an alternate for treating Diabetes mellitus.