

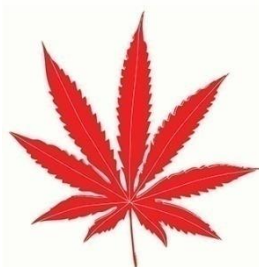


Conference Abstract
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Conference Abstract

INVESTIGATION OF PHYTOCHEMICAL CONSTITUENTS OF CASSIA FISTULA LINN FRUIT WALL AND ASSESSMENT OF ITS HYPOGLYCEMIC ACTIVITY.

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ABSTRACT

Cassia fistula L. is a magical herb, enriched with numerous therapeutically important chemical constituents exhibiting antifungal, hepatoprotective, antimicrobial, anti-inflammatory, analgesic and nephroprotective activities. The present study focus on qualitative and quantitative phytochemical analysis, proximate analysis, standardization and evaluation of antidiabetic potential using alpha amylase inhibition assay and Streptozotocin induced diabetic rat model. UV Visible and FTIR spectrum indicate presence of beneficial chemical constituents. Atomic absorption showed presence of valuable metals. All values of proximate analysis lied in limits specified by British Pharmacopeia. The results of phytochemical evaluation have exhibited the existence of primary metabolites (%w/w); carbohydrates (69.89+0.01) > proteins (10.55+0.66) > lipids (3.65+0.53) and secondary metabolites (mg/g); compared to n-hexane and methanol extracts, maximum quantities of polysaccharide (112.94+0.0015), flavonoids (49.77+0.01), polyphenols (48.39±0.026) and glycosaponins (24.47+0.004) were found in chloroform extract. The alpha-amylase assay results showed the percentage inhibition as; n-hexane extract (93%) > methanol extract (81%) > chloroform extract (64.7%). Diabetes was induced in rats by streptozotocin and outcomes have suggested that at a 200mg/kg dose, n-hexane has shown the maximum hypoglycemic effect as compared to the other extracts. The findings of the present study have verified that Cassia fistula L. has anti-diabetic potential and further investigation is needed to ensure safety and efficacy. At dose of 200mg/kg, n-hexane has shown maximum antidiabetic potential followed by methanol and chloroform. This in vivo trend of antidiabetic activity is complementary to that of in vitro assay.

Keywords: Medicinal plant, Cassia fistula, standardization, Antidiabetic.

