Chemical characterization, antioxidant potential and hypoglycemic activity of the bark stem hydroalcoholic extract of Bauhinia cheilantha.

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Bauhinia cheilantha is native caatinga specie known as “pata de vaca” mainly used in popular medicine for diabetes, inflammations in general, helminthiasis, expectorant. The present study aims to evaluate the hypoglycemic and antioxidant activities of the hydroalcoholic extract of the bark stem of Bauhinia cheilantha (HEBC) in alloxan-induced diabetic rats and to isolate and characterize its major compounds using HPLC-MS. The animals were treated with oral administration of HEBC (100 mg/Kg), during 15 days; and diabetes was induced on days 6, 7 and 8. Blood glucose, urea, lipid profile, reduced glutathione (GSH), TBARS, activity in plasma and kidney homogenates were evaluated. The in vitro antioxidant properties of the HEBC analyzed were: viability of IMR-90 cells, scavenging of DPPH radical (IC50= 28.1µg/mL) and inhibition of TBARS production (10.0 mg/mL with an IP of 43.1%). The results indicate that the diabetic animals treated with HEBC showed decrease in blood glucose and urea levels in plasma as well as TBARS in kidney homogenates. Thus, we concluded that HEBC has multiple beneficial effects to diabetic rats, decreasing significantly hyperglycemia and oxidative stress.

Keywords: Diabetes mellitus; Alloxan; Bauhinia cheilantha ; Kaempferol; Antioxidant activity; Antihyperglycemic activity.

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