Phytochemicals of Christia vespertilionis leaf extract: Antioxidant, antidiabetic and toxicity capabilities

ABSTRACT

Phytochemicals of Christia vespertilionis plant is known for medicinal properties and used to treat various health problems. The present study revealed medicinal properties of the leaf extract of *Christia vespertilionis* plant as its total phenolic content derived is screened for their antioxidant, antidiabetic and toxicity properties by Folin-Ciocalteu method, DPPH assay with butylated hydroxytoluene standard, a-amylase inhibition assay with metformin standard, brine shrimp lethality bioassay respectively. The total phenolic content of leaves extract is identified as 128.852±3.90mg gallic acid equivalent per gram of dried sample. The antioxidant potentiality is identified with 34.72-2.01 percentage of free radical scavenging against 200-6.25mg/mL concentrations with IC_{50} 39.987mg/mL. The antidiabetic potentiality is identified with 23.33, 20.14 and 15.34 percentage against 500, 250 and 125mg/mL concentrations with IC_{50} 35.2mg/mL. The percentage of mortality identified as 21.59-10.87% for 200 and 12.5mg/mL concentrations. The results revealed that *Christia vespertilionis* leaf extract is enriched with potential therapeutic properties of phenolic content that is associated with low toxicity levels.