

# Phytochimic Study And Biological Activities Of The Hydro-Alcoholic Extract Of Leaves Of *Bridelia Ferruginea* Benth And Its Fractions

B. Bakoma<sup>b</sup>, K. S. Sanvee<sup>a</sup>, K. Metowogo<sup>a</sup>, K. Eklugadegkeku<sup>a</sup>,  
K. Aklikokou<sup>a</sup>, M. Gbeassor<sup>a</sup>

a Department of Animal Physiology, Faculty of Sciences, University of Lome, Togo.

b Departement of Pharmacy, Faculty of Health Sciences University of Lome, Togo BP 1515

**Background and purpose:** *Bridelia ferruginea* is a plant with antihyperglycemic properties. The roots are most used parts of the plant in traditional medicine against diabetes, this poses a problem of preservation of the species. Studies have shown that leaves have low antihyperglycaemic power. The aim of this study is to improve the antihyperglycemic using fractions of the leaf extract.

**Methods:** The effect of Leaf extract on Oral Glucose Tolerance Test (OGTT) was tested in healthy mice, phytochemical screening and antioxidant activity were achieved (in vitro: DPPH and ex vivo: AAPH); the fractions resulting from the fractionation were subjected to an OGTT test on mice, a phytochemical screening and antioxidant activity tests (in vitro: DPPH and ex vivo: AAPH).

**Results:** The extract showed an antihyperglycemic activity at 750 mg / kg at the 30th minute after administration of glucose to the mice. Phytochemical screening of the extract showed the presence of phenols, flavonoids and condensed tannins. The extract also showed antioxidant activity. The supernatant showed antihyperglycemic activity at 100 mg / kg in the 30th and 60th after glucose administration. Phytochemical screening of the supernatant revealed the presence of phenols, flavonoids and condensed tannins. The supernatant showed more pronounced antioxidant activity than the total extract. The other fraction of the pellet showed no antihyperglycemic activity at 100 mg / kg and the phytochemical screening revealed the presence of phenols, flavonoids. The pellet also showed less pronounced antioxidant activity than the supernatant.

**Conclusion:** In view of the results, the most active fraction obtained by fractionation technique is the supernatant.

**Keywords:** *Bridelia ferruginea*, diabetes, HPVO, antioxidant, fraction.