Antioxidant activity study and total phenolic determination of leaf extracts of *Ximenia americana* L. (Olacaceae) an anti-tumor plant used traditionally in Mali.

Madani MARIKO¹,²*, Serigne Omar SARR¹, Amadou DIOP¹, Issoufou Ali Modió¹, Blaise Dackouo², Yérim Mbagnick DIOP¹

¹Laboratory of Analytical Chemistry and Bromatology, University Cheikh Anta DIOP, B.P. 5005, Dakar, Senegal
²Laboratory of Analytical Chemistry, Faculty of Pharmacy, University of technical Sciences and Technology, B.P. 1805, Bamako, Mali

*Corresponding author email: marikomadani@gmail.com (00223 76 11 05 38)

Original submitted in on 10th August 2016. Published online at [www.m.elewa.org](http://www.m.elewa.org) on 31st October 2016

http://dx.doi.org/10.4314/jab.v106i1.5

ABSTRACT

**Objectives:** Most of the currently used anticancer drugs are highly toxic and expensive. There is a continuing need to identify new drugs that are more effective and less toxic. Plants are an important source of potentially useful compounds for the development of new anticancer drugs.

**Methodology and results:** This work was used to study the antioxidant activity of two extracts of *Ximenia americana* (Tallow wood) by the methods of ABTS•⁺ and DPPH using ascorbic acid as standard. It determined the rate of total phenolic in these extracts by the Folin-Ciocalteu (FC) method using Gallic acid as standard. The extracts inhibited the absorbance of DPPH• depending concentrations attesting that extracts of this plant contains antioxidants. The calculated IC₅₀ are 2.78 and 4.05 µg/mL for ethanolic and aqueous extracts respectively with DPPH•. Phenolic rates are 43.10; 41; 2 mg/mL respectively for alcoholic and aqueous extracts.

**Conclusion and application of results:** Future studies can be oriented on the isolation and identification of compounds involved in an anti-cancerous activity. The knowledge of this plant could be used to build an appropriate conservation strategy for this specie.

**Keywords:** Medicinal plants, ABTS•⁺, DPPH, Total phenolic, Cancer