



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

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### 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<sup>•+</sup> 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<sup>•</sup> depending concentrations attesting that extracts of this plant contains antioxidants. The calculated IC<sub>50</sub> are 2.78 and 4.05 µg/mL for ethanolic and aqueous extracts respectively with DPPH<sup>•</sup>. 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<sup>•+</sup>, DPPH, Total phenolic, Cancer