



ANTITUMOR AND ANTIOXIDANT POTENTIAL of the *Astronium graveolens* EXTRACT

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Introduction: *Astronium graveolens* Jacq (Anacardiaceae) is known as “Aroeira”, it is made up of a tree species 15-25 meters high and trunk between 40-60cm in diameter. Recent studies show different pharmacological activities of this species¹.

Objective: Evaluate the antitumor potential of the extract of *Astronium graveolens*, by using the bioassay of inhibition of tumor-induced discs of potato by *Agrobacterium tumefaciens*². This study also assessed the cytotoxicity of the same extract through bioassay *Artemia salina* and the antioxidant potential.

Methods: Hydroethanolic extract of *A. graveolens* leaves was evaluated. The anti-tumor test was carried out in Petri dishes, where five potato discs were placed. On them were added 5µL inoculum of *A. tumefaciens*. These plates were incubated for 24 hours at 28°C and then 5µL extract in concentrations of 0.001; 0.01; 0.1 to 1.0mg.ml⁻¹ were added to the inoculated potato discs, forming the experimental groups. Regarding the cytotoxic test, *A. salina* eggs were incubated in saline solution (pH 9.0), temperature (28±2°C) and light-controlled artificially. After 48 hours, they were collected and distributed Naupilos 10 individuals in each culture plate being administered concentrations 0.1; 0.25; 0.5 and 1.0 mg.mL⁻¹ of the extract of *A. graveolens*. The antioxidant activity was determined by the kidnapping method of DPPH radical³.

Results: The result of antitumor test received no relevance in the control group at concentrations of 1%, 0.1% and 0.001%. Already at a concentration of 0.01% was remarkable decreased. Regarding the cytotoxicity assay concentrations of 0.1; 0.25 and 0.5mg / ml had higher activity on the larvae of *A. salina* according to LC50 presented for this statement. Counting the number of dead after 24 and 48 h of exposure was carried out, that figure was used to calculate the LC50 using the PROBIT analysis with 95% confidence. The antioxidant activity was 85% for the extract at a concentration of 3 mg / mL.

Conclusion: According to the results it was found that extract of *A. graveolens* has antitumor and antioxidant potential through the test evaluated in this study. The test with *A. salina* presented the concentrations of 0.1; 0.25 and 0.5 mg / mL with increased cytotoxic activity.

References

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