IDENTIFICATION OF SECONDARY METABOLITES AND ASSESSMENT ACTIVITY ANTITUMORAL OF *Xylopia aromatica* IN VITRO

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**Introduction:** The *Xylopia aromatica*, a typical cerrado species, has been used in several studies due to the biological properties related to the presence of alkaloids, flavonoids and acetogenins presente in genus Annonaceae, to which it belongs. In this study, we evaluated the effect of extracts produced from this plant and identify secondary metabolites present. **Methodology:** The crude extract was partitioned with different solvents of increasing polarity (A-Hidroalcool, B-Hexane, C-Chloroform, D-ethyl acetate). The tumor was removed in ascitic form the peritoneal cavity for cultivation of cells *in vitro*. On the plate, 2.5 x 10⁵ cells were distributed per well, the treatments were applied at a serial dilution of 1000μg/ml to 32.3mg/mL of each partition, each solubilised in DMSO. The wells of the cell count were performed by excluding trypan blue method at 12 and 24 hours after treatment application. For the identification of secondary metabolites used the method described by MATOS (1997), which are based on qualitative tests addition of reagents and observing the formation of precipitates or color change. **Results:** All partitions of the plant extract were effective in inhibiting tumor growth *in vitro*, but there was no statistical difference between the partitions B, C and D. The Ehrlich tumor survival curve was evaluated *in vitro*, it was observed that with the passage of the amount of tumor cells was declining. The lowest concentrations (62.5 and 32.3mg/mL) reached IC50 within 12 hours. There was no statistical difference between the concentrations from 250 to 32.3mg/mL for the partitions B, C and D. All partitions presented steroidal, alkaloids and coumarins in its constitution. **Conclusion:** The partition *Xylopia aromatica* inhibited cell proliferation and were cytotoxic when lower concentrations were used. The antiproliferative activity observed may be related to the presence of secondary metabolites identified.

Key Words: Ehrlich tumor, cell culture, secondary metabolites

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