

The Effect of *Annona muricata* (Soursop) Leaf Extract on Colon Cancer Cells

Dominguez, Jaime (School: Jose Rojas Cortes)

According to Demographic Register of Puerto Rico (2011-2018), colorectal cancer had an incidence of 12.70 % among men and 11.50 % among women. For this reason, is important to found new alternatives and treatment options for this disease. *Annona muricata* (soursop), is a plant have been shown to have promising compounds that can be utilised in the treatment of cancer. In this research *Annona muricata* leaves extract was proved like viable a alternative to treat cancer cells. In the experiment the *Annona muricata* leaves extract was prepared by crushing 2g of leaves and putting them in 50 mL of methanol and centrifuged 18 hours. Then it was used in 3 rows of three dilutions: 1:10, 1:100 and 1:1,000 in 2 cultures plates of colon cancer. Then incubated with 5% CO₂ at 37 ° C for 24 and 48 hours. After the 24 hours, 10 microliters were took from each well from the cultures for counting in the cell counter by putting this 10 microliters in a lamella with the same volume of trypsina. The dilution 1:10 had approximately 40% of the cell death, it increased in 48 hours with approximately 96%. But nevertheless, the dilutions 1:100 and 1:1,000 don't have effect when compared to the control group. In conclusion, the hypothesis was accepted the *Annona muricata* leave extract had a mortal effect that eliminated the colon cancer cells through increasing of time.

Awards Won: