

ANTI-INFLAMMATORY AND ANTIBACTERIAL ACTIVITIES  
OF BATUAN (*Garcinia binucao*) FRUITS

by

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An Undergraduate Thesis Submitted to the  
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As Partial Fulfillment of the Requirements  
for the Degree of  
B.S. Chemistry

April 2010

## ABSTRACT

### ANTI-INFLAMMATORY AND ANTIBACTERIAL ACTIVITIES OF BATUAN (*Garcinia binucao*) FRUITS

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University of the Philippines Visayas, 2010

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In this study, fresh fruits of batuan (*Garcinia binucao*) was evaluated for its anti-inflammatory and antibacterial activities.

The anti-inflammatory assay using Carrageenan-Induced Paw Edema Method showed that n-hexane extracts (65.79%) and dichloromethane extracts (64.91%) exhibited anti-inflammatory activities comparable to Indomethacin, the positive control (67.11%).

The antibacterial assay using Paper Disk Diffusion Method showed that crude methanolic extracts, n-hexane extracts and dichloromethane extracts at 1000 $\mu$ g/mL were most effective against *Staphylococcus aureus*. The microbial indexes were 0.39, 0.47 and 0.50 respectively. The positive control, Amoxicillin has a 3.39 microbial index.

The components of the three most active extracts (crude methanolic, n-hexane and DCM extracts) from both assays were separated through Thin Layer Chromatography and subjected to phytochemical tests. Crude methanolic extracts contained alkaloids, phenolic compounds and cardiac glycosides. Both n-hexane and DCM extracts contained terpenes, alkaloids, saponins, phenolic compounds and cardiac glycosides. These bioactive compounds present may have been responsible for the anti-inflammatory and antibacterial activities of the extracts.