Cytotoxicity and Anti-vibriotic Activity of Noni as an Ethnobotanical

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ABSTRACT

The crude methanolic extract of Acacia, Alibutbut, Bayabas, Biab, Botolan, Bulobitu-un, Buyo, Kamunsil, Kasla, Kayos, Langka-langka, Noni, Pasaw, Sampaguita, Tabong, Talisay, Yellow bell, were bioassayed for their cytotoxicity using brine shrimp nauplii assay. Among the plant extracts, Noni gave the highest LC_{50} equal to 943.329 µg/mL.

Noni was the least toxic among the plants tested and its crude methanolic extract was found to have activity against *V. harveyi* with an anti-vibriotic index of 0.256. Sequential extraction using solvents with increasing polarity gave fractions that exhibited anti-vibriotic property but the more polar ethyl acetate fraction gave the highest anti-vibriotic index of 0.513. It appears that the anti-vibrio constituent is polar.

Using VLC, the ethyl acetate fraction was further separated into eighteen fractions which were in turn pooled into five fractions, F_A, F_B, F_C, F_D, and F_E based on their TLC profile. Anti-vibriotic activity of each fraction was determined. Fraction F_A has the highest anti-vibriotic index (0.192) but this is much lower than 0.513. There must be some synergy among the polar constituents that exhibited a higher anti-vibriotic index in the ethyl acetate fraction compared to fraction F_A.

Based on several color reactions, ethyl acetate fraction may contain any of the following plant metabolites such as tannins, saponins, phenolic groups, conjugated double bonds, flavonoids, sterols, terpenes, except alkaloids.