PHYTOCHEMICAL SCREENING, ANTIOXIDANT ACTIVITY, AND COMPARATIVE BIOEFFICACY ASSESSMENT OF CAMANSI (*Artocarpus camansi*) SEED EXTRACTS FOR *IN VITRO* ANTIBACTERIAL ACTIVITY

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ABSTRACT

This study was conducted to compare and assess the antibacterial and antioxidative properties, and to screen for the presence of phytochemical constituents in the different solvent-derived extracts of *Artocarpus camansi* seeds from Mintal, Davao City. Phytochemical analysis revealed the presence of alkaloids, flavonoids, glycosides, phenol, steroids, tannins, and terpenoids in the methanol extract. The antibacterial efficacy was determined by agar well diffusion method against *B. subtilis* and *E. coli*. Streptomycin was used as a standard drug for the study of antibacterial activity. Sensitivity in terms of zones of inhibition and phytochemical composition of the different extracts were also determined. Results showed that all extracts were effective against both of the bacteria tested with the pet. ether and DCM extracts showing moderate activity, and the methanol extract exhibiting strong activity against *B. subtilis* and *E. coli*. Furthermore, methanol extract of *A. camansi* seeds possessed strong DPPH radical scavenging activity. In the DPPH method, the pet. ether, DCM, and methanol extracts showed free radical inhibition of 18.96±0.16%, 21.62±0.14%, and 90.05±0.08%, respectively. The IC_{50} value obtained for the methanol seed extract at concentration 0.05 g/mL was 6.67±0.004 g/L. The current findings suggest that the phytochemicals present in the methanol extract of *Artocarpus camansi* seeds (alkaloids, flavonoids, glycosides, phenol, steroids, tannins, and terpenoids) may be responsible for the antibacterial and antioxidant activity.