



**COMPARISON OF ANGIOGENIC POTENTIAL FOR *Luffa acutangula* L.
(PATOLA) FRUIT EXTRACT AND *Tamarindus indica* L. (SAMPALOK)
SEED EXTRACT ON CHICK EMBRYO USING CAM ASSAY**

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ABSTRACT

Two economically important plants cultivated in the Philippines were evaluated for their angiogenic potential in search for the treatment of tumor growth and cancer: *Luffa acutangula* L. (Patola) and *Tamarindus indica* L. (Sampalok) are both extensively used in cuisines and considered as traditional medicines. Both of these test plants contain bioactive compounds like flavonoids, saponins, tannins, and triterpenoids. Literature review showed that most of the studies on *L. acutangula* and *T. indica* focused on the antioxidant, anti-inflammatory, and abortive properties. The present study explored their potential to inhibit or promote blood vessel formation from pre-existing blood vessels (Angiogenesis) of the chorioallantoic membrane (CAM) of a 10-day old chick embryo (*Gallus gallus*). Using Completely Randomized Block Design (CRBD) treatment, 0.2 ml of the extract with varying concentrations of 100 ppm, 200 ppm and 300 ppm, was administered to the 63 fertilized chicken eggs. Physiological saline (0.09% NaCl) was used as negative control (T₀). One-way Analysis of Variance (ANOVA) followed by Tukey's Test, demonstrated that all the treated groups (T₂ to T₆) except for 100 ppm (T₁) concentration of *L. acutangula* is significantly different from T₀ (p value < 0.05). Between the two plant extracts, *T. indica* significantly reduced the number of blood vessels more than *L. acutangula*. In addition, *T. indica* at 200 ppm (T₅) significantly inhibited the formation of blood vessel the most among the treatments. Large samples are needed to validate these findings; however, the results revealed that anti-angiogenic response is greater as the concentration becomes higher. In conclusion, this study was able to demonstrate that both *L. acutangula* and *T. indica* possess anti-angiogenic properties, which can be further explored as a potential source of drugs in treating diseases such as cancer.