



De La Salle University – Dasmariñas

**ANGIOGENIC EFFECT OF *Aloe vera* LEAF EXTRACT TO THE
CHORIOALLANTOIC MEMBRANE (CAM)
OF A 10-DAY OLD CHICK EMBRYO**

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ABSTRACT

Angiogenesis is defined as the formation of new blood vessels. This is aimed to determine the different angiogenic effects of the different concentrations of the *Aloe vera* crude leaf extract to the 10-day old chick embryo and the significant difference among each one of the treatments. As what the results have shown, *Aloe vera* crude leaf extract inhibited angiogenesis to the CAM of a 10-day old chick embryo. In the concentration of 150 ppm (parts per million), the treatment projected with the least amount of collaterals formed other than to other concentrations used. This result indicates the inhibition of the angiogenic effect of the *Aloe vera* crude leaf extract to the chick embryo. Statistically, the results obtained from the study is significant based on the computed F-ratio and F-critical using the one-way ANOVA. The three concentrations (T_1 , T_2 , T_3) inhibited angiogenesis in the CAM of the chick embryo. Using the LSD or the Least Significant Difference test, T_1 with 150 ppm when compared to the negative control is significant. This goes to show that the *Aloe vera* crude leaf extract exhibited inhibitory effect in the CAM compared to the treatments with 200 ppm and 300 ppm of the crude leaf extract. As what the results have shown, it is recommended to use an electron microscope to fully view the formation of collaterals so that proper counting and observation should be done. It is also advised to use different test organisms such as the duck embryo or the rabbit corneal micropocket to be utilized in the study. Also, utilization of the distinct parts of the *Aloe vera* like the gel and the leaves alone should be used. 10-day old chick embryo should be strictly used in this kind of experiment and scientific chemical components of the *Aloe vera* contributing to its anti-angiogenic property should be studied as well.



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