



ABSTRACT

Angiogenesis, a complex biological process occurring normally in the development of vascular networks from the existing blood vessels is important in oxygenating tissues specifically in wound healing and tumor growth. This experimental study deals with the anti-angiogenic effect of the bioluminescent bacterial supernatant isolated from *Photololigo chinensis* (squid) ink on fertilized *Gallus gallus domesticus* (chick) eggs. The study utilized Complete Randomized Design (CRD) consisting of 1 control group and 2 concentrations with the following representations: T₀= control (distilled water), T₁= 50% (50% supernatant + 50% of dH₂O), and T₂= 100%. The bacterial supernatant was obtained from pure bacterial isolates cultured in a marine broth that was centrifuged and filter-sterilized using 0.45μ membrane filter. A total of 27 test eggs were incubated for 12 days. On the 12th day of incubation, different concentrations of 0.2 ml of the bacterial supernatant was administered on the test eggs. The CAM of the test eggs were harvested and the number of secondary blood vessels formed were counted on the 14th day of incubation. Results showed that the bacterial supernatant is an inhibitor of angiogenesis due to the reduction on the number of secondary blood vessels formed. The statistical data exhibited that there is a decreasing trend in the number of secondary blood vessels formed as the concentration of the supernatant increases. However, T₂ showed a more inhibitory potential due to the greater number of secondary metabolites, such as bacteriocupreins and luciferin present in the supernatant.

Key words: bioluminescent bacteria, Photololigo chinensis, Anti-angiogenesis