THE EVALUATION ON ANTIBACTERIAL AND ANTI-INFLAMMATORY ACTIVITIES OF *Azadirachta indica*

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TABLE OF CONTENT

ABSTRACT

Azadirachta indica possesses significant medicinal properties and has been extensively used as a health care remedy to treat skin infection, chicken pox and many more in many countries. Therefore, this study is aimed to evaluate the potential of *Azadirachta indica* as antibacterial and anti-inflammatory. In this study, 50 g of *A.indica* leaves was used and extracted using different percentage of ethanol which is 50% and 95%. We prepared the extract of *A.indica* from different percentage of ethanol of 95% and 50% through maceration method for 3 days. In antibacterial bioactivity, disc-diffusion method was utilized. Extracts at all concentration of 50mg/ml, 25g/ml and 12.5 mg/ml are not susceptible to both *E.coli* and *B. licheniformis*. Meanwhile for anti-inflammatory bioactivity, heat-induced protein denaturation method against egg albumin was utilized. The results shows 95% ethanol extract of *A.indica* shows better protein denaturation (55.35% at 1mg/ml) compared to 50% ethanol extract (30.35% at 1mg/ml). The results was compared to the standard drugs of diclofenac. The results was insignificantly $P < 0.9$. The qualitative phytochemical test give positive results for the present of alkaloid, saponin, and flavonoid in *A.indica* leaves extract. Therefore, in this study, the 95% and 50% ethanol extract of *Azadirachta indica* leaves do not show antibacterial activity toward *E.coli* and *B.licheniformis* but it shows potential as anti-inflammatory.