Growth Inhibitory Effect On Bacteria Of *Swietenia Macrophylla* King Seeds And Leaves Crude Alkaloid Extracts

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ABSTRACT
The uses of plant-based products for disease prevention and treatment become increasingly popular in many societies. Plants are considered one of the major sources for many bioactive groups such as alkaloids. The purpose of this study was to determine the rate of alkaloids and investigate antibacterial activity of alkaloid fraction of seeds and leaves from plant, genus *Swietenia* of *S. macrophylla* (Familay: Maliaceae) against four pathogenic bacteria namely; *Gram*-positive: *Staphylococcus aureus* ATCC1026 and *Gram*-negative: *Escherichia coli* ATCC10536, *Pseudomonas aeruginosa* ATCC15442, and *Salmonella typhimurium* ATCC14038 based on inhibition zones. For the antibacterial bioassay, two concentrations, 50 and 100 mg/mL of seeds and leaves extracts were prepared and tested by disc diffusion method. The obtained results showed that the plant parts contain various levels of alkaloids, and with appreciable level of antibacterial activity against all tested microorganisms. The seeds extract showed high activity at a concentration of 100 mg/mL compared with leaves at the same concentration, especially against *Gram*-positive strain. The inhibition zones ranged from 3 to 21 mm for all treatments. The minimum inhibitory concentration (MIC) and minimum bactericidal concentration (MBC) values of the extracts ranged from 12.5 to 50 mg/mL. Furthermore, on TLC screening for phytochemicals groups, positive and interesting results were obtained, and the work underway to identify the bioactive compound(s).

KEYWORDS: Swietenia macrophylla King; Alkaloid; Antibacterial Activity; MIC; MBC

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