

**PHYTOCHEMICAL ANALYSIS, ANTIBACTERIAL AND
ANTIFUNGAL ACTIVITY OF PETROLEUM ETHER,
ETHYL ACETATE AND ETHANOL EXTRACTS
IN THE STEM BARK OF *PITHECELLOBIUM*
*JIRINGA***

NURUL ANASUHAH BINTI OSMAN

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ABSTRACT

PHYTOCHEMICAL ANALYSIS, ANTIBACTERIAL AND ANTIFUNGAL ACTIVITY OF PETROLEUM ETHER, ETHYL ACETATE AND ETHANOL EXTRACTS IN STEM BARK OF *PITHECELLOBIUM JIRINGA*

The aim of this study seeks to investigate the phytochemical analysis, antibacterial and antifungal activity of petroleum ether, ethyl acetate and ethanol extracts in stem bark of *Pithecellobium jiringa* (*P. jiringa*). The studies on phytochemical analysis was revealed the presence of important secondary metabolites; tannins, flavonoids, terpenoids and saponins in the plant hence indicating the medicinal potentials of plant. The study was investigated antibacterial and antifungal activity of *P. jiringa* stem bark. The test was conducted on two bacteria gram-positive strains (*Staphylococcus aureus* and *Staphylococcus epidermidis*) and two dermatophytes (*Trichophyton mentagrophytes* and *Candida albicans*). These microorganisms are the causative agents that attack various parts of the body and skin and tend to the following conditions; Tinea corporis (Ringworm of the Body), Tinea cruris (Jock itch), Candidiasis (Moniliasis; Thrush), and Staphylococcal infection. The results showed that the crude extract of the stem bark of *P. jiringa* exhibited marked antimicrobial effects on *Staphylococcus aureus*, *Staphylococcus epidermidis*, and *Trichophyton mentagrophytes* and not inhibited on *Candida albicans*. The crude extract showed the highest or active inhibition on the microorganisms was ethyl acetate extract with 11.7 mm, 13 mm and 28 mm zones of inhibition respectively. The larger zones inhibition was at highest concentration, 200 mg/ml for antibacterial and 400 mg/ml for antifungal activity. The ethyl acetate and ethanol extracts of *P. jiringa* stem bark screening showed more potent inhibit against all the tested microorganisms. Furthermore, the bioautography assay revealed the secondary metabolites that presence in the plant positively inhibited microorganisms. It is concluded that *P. jiringa* stem bark have a potential source of active antimicrobial agent, and a detailed assessment of its in vivo potencies and toxicological profile is therefore advocated.