

Determination of Antibacterial Activity of *Madhuca longifolia* (Mee)

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Discovery of novel antimicrobials is a necessity due to the emerging antimicrobial resistant. Medicinal plants are a rich source for discovering novel antimicrobial compounds. Traditional dressings made of *Madhuca longifolia* (mee) has been used in traditional medicinal practices in Sri Lanka to treat wounds, but its antimicrobial properties have not been scientifically investigated. The objective of this study was to investigate the antimicrobial activity of this plant extract against Methicillin Resistance *Staphylococcus aureus* (MRSA) and *Acinetobacter baumannii* which are known to infect both acute and chronic wounds. This is a descriptive study performed at student laboratory, KIU. Two clinical isolates of MRSA and *Acinetobacter baumannii* were obtained from the Department of Microbiology, Faculty of Medicine, University of Sri Jayawardenepura. *Madhuca longifolia* (mee) was obtained from herbal garden (Osu uyana, Battaramulla) in Sri Lanka. Aqueous extraction of the plant was prepared by maceration of 60g of dried leaves with 1440 ml of distilled water followed by filtering using 0.22 um filter. This was then boiled down to 240 ml which was labelled as x1 the concentration. This was further concentrated as x2, x3, x5, x10. Antimicrobial activity of these extracts were determined by well diffusion method. The mean zones of inhibition against MRSA were 18 mm, 16.7 mm, 15.6 mm, 11.6 mm for the concentrations x1, x2, x5, x10 respectively. No inhibition zones were observed against *Acinetobacter baumannii*. *Madhuca longifolia* (mee) leaf extract has a potential antimicrobial activity against MRSA.

Keywords: Antimicrobial, MRSA, *Acinetobacter baumannii*