ANTIMICROBIAL ACTIVITY OF ACETONE EXTRACT OF *Senna alata* LEAF AGAINST SKIN PATHOGEN

NOR SHELA BINTI KAMARUDIN

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Faculty of Health Science, Universiti Teknologi MARA

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DECLARATION

I hereby declare that the work in this thesis is based on my original work and was carried out in accordance with the regulation of Universiti Teknologi MARA (UITM). This thesis has not been submitted to any other academic institution or non-academic institution for any other degree student or qualification.

JULY, 2017 ……

NOR SHELA BINTI KAMARUDIN

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ABSTARCT

ANTIMICROBIAL ACTIVITY OF ACETONE EXTRACT OF *Senna alata* LEAF AGAINST SKIN PATHOGEN

Senna alata also known as “Pokok gelenggang” is one of the plants that are used as a traditional medicine for long time ago. The *Senna alata* is able to treat diarrhea, dysentery and other gasterointestinal problem. Moreover, it is also reported to have antifungal activity. The present study was initiated to explore the antimicrobial activity of acetone extract of *Senna alata* leaf against skin pathogen. Thus, the extract of *Senna alata* leaf was prepared using acetone as an extraction solvent. Acetone extractions were done using maceration technique. In order to determine the antimicrobial activity of *Senna alata* against skin pathogen which is *S. aureus, S. epidermidis, P. aeruginosa* and *P. mirabilis*, Antimicrobial Susceptibility Testing (AST) by disc diffusion method and Minimal Inhibitory Concentration (MIC) by using microdilution broth assays were performed. Significant results of *Senna alata* leaf extract effect are shown in *S. aureus, S. epidermidis* and *P.mirabilis*. The result for AST showed largest inhibition zone against *Staphylococcus epidermidis* (13.67mm±1.52). It was followed by *Staphylococcus aureus* (11.33mm±1.15) and *Proteus mirabilis* (9.0mm±1.0). While, for *Pseudomonas aeruginosa* showed no inhibition zone at all. The MIC showed that *S. epidermidis* had the lowest MIC value (31.25mg/ml). *S. aureus* had 62.5 mg/ml meanwhile *P. mirabilis* had 250 mg/ml of MIC value. As a conclusion, acetone extract of *Senna alata* leaf had antimicrobial activity against skin pathogen and had a potential to use as natural product in antimicrobial agents.

Keywords: *Senna alata*, antimicrobial, antibacterial, acetone extract, phytochemical, Malaysia