PHYTOCHEMICAL SCREENING AND ANTIMICROBIAL ACTIVITIES OF *Dialium indum*

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Final Year Project Report Submitted in
Partial Fulfillment of the Requirements for the
Degree of Bachelor of Science (Hons.) Biology
In the Faculty of Applied Sciences
Universiti Teknologi MARA

JANUARY 2016

ACKNOWLEDGEMENT

Praise to Allah that giving me strength to finish up the study of *D. indum* as a part of FSG 661. I would like to express my gratitude to my supervisor, Miss Nur Thabitah bt Syeikh Nasir for the guidance and teaching she taught to me and being patient towards my incompetence during the study being done. I also would like to extend my appreciation to En Suhairi and En Hafiz the lab assistants of Biology Laboratory for every supports that they offered to me in order to complete the study without any harm. My gratitude also goes to my fellow friends who support me with their teaching and guidance to complete this study. Last but not least, I also take this opportunity to acknowledge Universiti Teknologi MARA for giving me a chance to study the phytochemical content and antimicrobial activity in *D. indum.*

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ABSTRACT

PHYTOCHEMICAL SCREENING AND ANTIMICROBIAL ACTIVITIES OF *Dialium indum*

Dialium indum or also known as keranji in Malay is a type of tree that grows wild in forest or forest edge and grows through seeds. These trees are growing wild in lowland forest in Malaysia, Thailand and Indo-China. Nevertheless, there is too little study has been recorded about *Dialium indum* especially its phytochemicals and antimicrobial activity. The aim of this study is to identify the phytochemicals available and antimicrobial activity in *D. indum* fruit pulps extracts. Three different types of solvents which are methanol, cyclohexane and dichloromethane are used to identify the phytochemical contents and antimicrobial activities in *D. indum.* For antimicrobial activity study, *Staphylococcus aureus*, *Bacillus subtilis* and *Escherichia coli* were chosen for the purpose of testing the antimicrobial activities in *D.indum*. The *D. indum* solvent extracts were prepared at various concentration ranging 25 – 100 µg/µl and disc diffusion assay method was used to observe the zone of inhibition in each solvent extracts before the results were analyzed statistically. Result showed that methanol extract managed to extract tannins, flavonoids, terpenoids, saponins and alkaloids from *D. indum* fruit pulp. Whereas antimicrobial activity shown better result in cyclohexane extract compared to methanol extract and DCM extract in the plates containing *B. subtilis* and *E. coli* with most of zone of inhibition present in cyclohexane extracts were bigger than methanol extracts and DCM extracts whereas methanol extract showed the highest zone of inhibition compared to DCM extract and cyclohexane extract in the plates containing *S. aureus*. From the results obtained, *D. indum* fruit pulps have the potential to be developed as antibiotics due to large zone of inhibition presented by the *D. indum* extracts. In addition, the phytochemical contents present in *D. indum* also have antimicrobial properties that contributed to the antimicrobial activity in *D. indum* extracts.