

**PHYTOCHEMICAL ANALYSIS, ANTIMICROBIAL AND
ANTIFUNGAL ACTIVITY OF METHANOL AND HEXANE
CRUDE EXTRACTS IN THE STEM BARK OF
*PITHECELLOBIUM JIRINGGA***

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

JANUARY 2016

ACKNOWLEDGEMENTS

Upon completing of this project, I would like to express my gratitude to many parties. My heartfelt thanks goes to my supervisor, Madam Zurhana Bt Mat Hussin who has help me throughout the process of completing the proposal until finishing my thesis. She had help me and concerning of my lab work without complaining and give up towards me. She had gave me encourage through her attitude and convincing to complete my study even though I start my lab work late than the other friends. Without her kindness, tolerate and helps this dissertation would not have been possible. To Dr Aiza bt Harun, our coordinator I would like to confess my thankfulness for giving us all the information and concerning on our lab works in completing the final year project. Your helps had gave us the encourage to finish our final year project. I also would like to thank my friends, Nurul Anasuha, Azwanis Sofea, Erlina Norasmira ,Nur Atiqah, Mohamad Azfar and biology students for giving me so much help and tolerate my questions throughout the lab work session even though they got their own work. A thank to the lab assistants En. Fauzi, En. Zahir and En. Suhari who help me a lot in this final year projects for my final semester. Not to forget to all my family for tireless supports and prayers for completing this final year project. Alhamdulillah all praised to Allah, the merciful and compassionate, for without Him all things are impossible.

Wan Ainaa Nabilah bt Wan Baharin

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ABSTRACT

PHYTOCHEMICAL ANALYSIS, ANTIMICROBIAL AND ANTIFUNGAL ACTIVITY OF METHANOL AND HEXANE CRUDE EXTRACTS IN STEM THE BARK OF *PITHECELLOBIUM JIRINGA*

This study was carried to investigate the phytochemical analysis, antimicrobial and antifungal activity of stem bark of *Pithecellobium Jiringa*. The aim of the study is to assess the zone of inhibition of bacteria and fungi strains by using two types of extract which are hexane and methanol. This study also discover the active compound exist in the crude extract. The compound perform was found out to be terpenoids, saponins, flavanoids and tannins in methanol extract but only saponins exist in hexane. The antimicrobial and antifungal activity were determined using agar disc diffusion method by using four dilution concentration of methanol extracts (25 mg/mL, 50 mg/mL, 100 mg/mL and 200 mg/mL) and three dilution concentration of hexane extracts (50 mg/mL, 100 mg/mL and 200 mg/mL) towards two type of bacteria strain and two type of fungi strains. The bacteria strain are *Staphylococcus aureus* and *Staphylococcus epidermis*, meanwhile fungi stains are *Trychophyton mantegrophyte* and *Candida albicans*. The methanol crude extract can inhibit both bacteria and fungi strain at highest dilution concentration but hexane shows no inhibition zone. The findings comply with formation of active compound in methanol extract. As a result, the stem bark of *Pithecellobium Jiringa* has a potential to be used as bioactive natural product for pharmaceutical purposes.