

**INVESTIGATION ON ANTIBACTERIAL ACTIVITY OF  
CANDLE BUSH (*Cassia alata*) AGAINST SKIN-INFECTING  
BACTERIA**

**SITI SARAH BINTI MOHAMAD ALI**

**BACHELOR OF SCIENCE (Hons.) BIOLOGY  
FACULTY OF APPLIED SCIENCE  
UNIVERSITI TEKNOLOGI MARA**

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BUSH (*Cassia alata*) AGAINST SKIN-INFECTING BACTERIA**

**SITI SARAH BINTI MOHAMAD ALI**

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This Final Year Project Report entitled “**Investigation on Antibacterial Activity of Candle Bush (*Cassia alata*) Against Skin-infecting Bacteria**” was submitted by Siti Sarah Binti Mohamad Ali in partial fulfilment of the requirements for the Degree of Bachelor of Science (Hons.) Biology, in the Faculty of Applied Sciences, and was approved by:

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Muhammad Azhar Bin Zulkffle  
Supervisor  
B. Sc. (Hons.) Biology  
Faculty of Applied Sciences  
Universiti Teknologi MARA  
02600 Arau, Perlis

---

Muhammad Syukri Bin Noor Aman  
Project Coordinator  
B. Sc. (Hons.) Biology  
Faculty of Applied Sciences  
Universiti Teknologi MARA  
02600 Arau, Perlis

---

Dr. Rosyaini Afindi Azman  
Head of Programme  
B. Sc. (Hons.) Biology  
Faculty of Applied Sciences  
Universiti Teknologi MARA  
02600 Arau, Perlis

Date:

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## ABSTRACT

Topical medication usually possesses side effects such as skin inflammation, redness, and dryness. While oral antibiotics have higher negative effects and limitations which cannot be used especially during pregnancy and lactation. Despite the availability of those medications, finding a plant-based substance with comparable antibacterial activity is one of the alternatives in avoiding these issues. *Cassia alata* has met the criteria needed. *Cassia alata* is a tropical and humid-climate medicinal herb belonging to the Leguminosae family. Some of the conditions that this plant has been traditionally used to cure includes typhoid, diabetes, malaria, asthma, ringworms, tinea infections, scabies, blotch, herpes, and eczema. The aim of the current study is to investigate antibacterial effect of *Cassia alata* against skin-infecting bacteria. In this study, antibacterial activity of methanolic *Cassia alata* extract was tested toward *Staphylococcus aureus* by using Kirby-Bauer method and the evaluation of antioxidant activity using DPPH assay. Antibacterial test using Kirby-Bauer method demonstrated that *Cassia alata* extract exhibited antibacterial activity against *Staphylococcus aureus* for three times of replication for each concentration by showing inhibition zone. T- test analysis was carried out for statistical analysis where 50% and 100% *Cassia alata* extracts were not statistically significant ( $P > 0.05$ ) since each of the concentration showed differences in antibacterial activity through the differences in the size of diameter for inhibition zone. Furthermore, the result for antioxidant test shows that 100%