

UNIVERSITI TEKNOLOGI MARA

**THE EFFECTS OF AQUEOUS EXTRACT
FROM *Hibiscus rosa-sinensis* LEAVES ON
COAGULATION ACTIVITY**

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Project submitted in fulfilment of the requirements for the Degree of
Bachelor in Medical Laboratory Technology (Hons.)

Faculty of Health Sciences

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DECLARATION BY STUDENT

“I hereby declare that this thesis entitled The Effect of Aqueous Extract from *Hibiscus rosa-sinensis* is the result of my own research except as cited in the references. The thesis has not been submitted or currently for any other degree at UiTM or any institution”

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“We must believe in ourselves or no one else will believe in us; we must match our aspirations with competence, courage and determination to succeed”

By Rosalyn Yalow

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ABSTRACT

Hibiscus rosa-sinensis (*H. rosa-sinensis*) or 'bunga raya' is commonly found as houseplant and landscape shrub throughout the tropics such as Malaysia, India, Singapore and Indonesia. *H. rosa-sinensis* plant has been scientifically associated with antioxidant, antipyretic, analgesic, spasm-inhibiting activities, inhibit cancer cell growth and helps in wound healing. Traditionally, its leaves are believed to have the ability to stop minor bleeding. The leaves were rubbed on the injured site until they produce clear, thick and sticky liquid which were then left on the wound like a skin patch. Thus, the present study was carried out using its leaves to evaluate whether it contains any procoagulant activity. The fresh leaves were blended with distilled water and decoction method was used to concentrate the crude extract. Four different percentages of aqueous extract were prepared at 100.0%, 50.0%, 25.0% and 12.5% via two-fold serial dilution using normal saline. Then, procoagulant activity was evaluated *in vitro* by using activated partial thromboplastin time (aPTT) and prothrombin time (PT) tests in triplicates. Commercialised control normal plasma were spiked with the different percentages of extract prepared. One-way ANOVA and Post hoc (Dunnett's procedure) tests were used for the statistical analysis. The result revealed a procoagulant trend with the coagulation time decreasing as the percentages increased. All percentages of aqueous extracts showed very highly significant effect on both aPTT and PT tests with their *p* value obtained were equal to 0.000. Hence, the aqueous extract from *H. rosa-sinensis* leaves has the potential to be a natural procoagulant for treatment of minor bleeding.

Keywords: *Hibiscus rosa-sinensis*. Procoagulant, Coagulation activity