

UNIVERSITI TEKNOLOGI MARA

**EFFECTS OF INDIGENOUS PLANT *KAEMPFERIA*
GALANGA EXTRACT ON BLOOD PARAMETERS
IN RATS**

NOOR SHAHRUL BIN MUSA

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ABSTRACT

Medicinal plants are available abundantly in the tropics. These plants are important in Asian societies because of widespread use in traditional medicine. One of the plants is *Kaempferia galanga* L. (Zingiberaceae). Because of its widespread use in various Asian countries, therefore, there is a need to study the safety of this plant. In the present study the ethyl acetate extract of *Kaempferia galanga* was used to test acute and subacute toxicity effects. In the acute toxicity study, three rats out of five rats in the treatment group died. The lungs showed hemorrhagic condition. In the subacute toxicity study, only one death was recorded in treatment group. No pathologic organ changes were recorded. Hematology analysis showed significant changes in mean corpuscular volume, neutrophils and lymphocytes count in acute toxicity studies. There was no significant difference in the blood parameters in the subacute toxicity study. Blood chemistry analysis showed a significant difference in urea levels in both acute and subacute toxicity studies. It is concluded that *Kaempferia galanga* extract is relatively toxic and it is recommended that further studies should be done to determine its safety level.

CHAPTER 1

INTRODUCTION

Approximately 60-80% of the world's population still depends on traditional medicines for the treatment of common ailments and diseases (Farnsworth *et al.*, 1985; World Health Organization, 2002; Zhang, 2004 as cited in Libman *et al.*, 2006). Traditional remedies have a long-standing history in many Asian societies and have continued to provide useful tools for treating diseases (Libman *et al.*, 2006).

Traditional medicine plays an important role in treating illnesses in Asian societies. According to WHO (2006), traditional medicine is the sum total of the knowledge, skills, and practices based on the theories, beliefs, and experiences indigenous to different cultures, whether explicable or not. It is used in the maintenance of health as well as in the prevention, diagnosis, improvement or treatment of physical and mental illness.

Medicinal plants are available abundantly in the tropics. The importance of these plants is not questionable. This is because they provide the local population immediate access to safe and effective products for use in the treatment of illness through self-medication.