

UNIVERSITI TEKNOLOGI MARA

**EFFECTS OF *HYLOCEREUS POLYRHIZUS*
FLESH ON BLOOD PARAMETERS IN MICE**

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ABSTRACT

This study was conducted to determine the potential effects and toxicity associated with the use of *Hylocereus Polyrhizus* on blood parameters in mice. Two groups of six mice were given either the flesh with seed extract of *HP* (treatment group) or normal saline (control group). The flesh with seed extract of *Hylocereus polyrhizus* was administered by gavage with the use of oral needle. Blood samples were obtained by cardiac puncture. No mortality and clinical signs of toxicity were observed upon administration of *HP* for both acute and sub acute toxicity studies. Blood analysis showed significant changes in certain blood parameters. In the acute toxicity study, the blood levels of urea were significantly lower in the treatment group. In the sub acute toxicity study, there were no significance differences between both groups for all parameters. It can be concluded that the flesh's extract of *HP* can affect certain blood parameters and possibly has hepatoprotective effects. Further studies are needed to validate these effects in order to ensure the safe consumption of *HP* fruit.

Keywords: *Hylocereus Polyrhizus*; Acute toxicity; Sub acute toxicity, Blood Parameters

CHAPTER I

INTRODUCTION

The use of traditional medicine is spreading mostly in industrialized countries (WHO, 2003). In United States, alternative therapy is becoming increasingly popular and is often used by individuals with chronic health conditions. It is estimated that American consumers are spending as much on alternative therapies as hospital care (Martin, 1997). Herbal and other natural products are among the most popular complementary and alternative medicine (CAM) therapies (Kessler *et al.*, 2001).

Whereas in Malaysia, interest in the exploitation of medicinal and aromatic plants as pharmaceuticals, herbal remedies, flavourings, perfumes and cosmetics, and other natural products has greatly increased in the recent years (Kumar *et al.*, 2000).

Eisenberg *et al.* reported a 380% increase in the use of herbal remedies and a 130% increase in high-dose vitamin use between 1990 and 1997. These show the belief that herbs component can treat or prevent diseases, and thus encouraged the new generation to trust on the beneficial effects of the ingredient contained within nature's packages (Barile, 2004).