UNIVERSITI TEKNOLOGI MARA

ANTIHEPATOTOXICITY OF *Clidermia hirta*

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ABSTRACT

This is a preliminary study which aim to observe the antihepatotoxic activity of *Clidermia hirta*. The aqueous extract of *Clidermia hirta* leave was evaluated for its toxicity and antihepatotoxic activity against acetaminophen-induced hepatotoxic in mice. Mice were given dose of extract 2500 mg/kg, 1000 mg/kg and 500mg/kg to determine the mortality rate which are 100 %, 0 % and 0% respectively. Study is continued with antihepatotoxic study with 3 groups that consists of 6 mice each group. The groups are control (water + acetaminophen) and 2 test (extract + acetaminophen) group which have 2 different extract dose, 100 mg/kg and 50 mg/kg. The activity of the mice is evaluated by liver weight in gram per 10 gram of bodyweight which is not so reliable to conclude any remarkable antihepatotoxic activity of this plant.

CHAPTER 1

INTRODUCTION

1.1 Introduction

Clidemia hirta (L.) D. Don from Melastomaceae family is considered as a weed and so far, no research has been made on the aside function. According to Pacific Island Ecosystem at Risk (PIER), *Clidemia hirta* is a dicotyledon, vascular and flowering plant. It can grow up to 5 m with branches but usually between 0.5 and 3 m. It is able to growth in both sun light exposure and canopy cover. *C. hirta* is a serious weed on many tropical oceanic islands for example Fiji and Seychelles, southeast Asia, India and East Africa (Binggeli, 1997). Hairy leave of C.hirta is in ovate to oblong-ovate shape, opposite to each other and petiolate. There are 5 major veins appear on the leave which is extending to apex from the base.

Weight for normal adult liver is usually around 1400 to 1600g and it represent about 2.5% of the body weight (Kumar et al., 2005). Liver receive approximately 1.3L of blood each minute which originate from portal vein, mostly and hepatic artery. Liver tissue consists of hepatocyte mostly and other liver cells that perform protein synthesis,