

UNIVERSITI TEKNOLOGI MARA

**A STUDY OF THE POTENTIAL EFFECT OF AN
AQUEOUS EXTRACT OF *CENTELLA ASIATICA* AS
AN ANTIDEPRESSANT**

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ABSTRACT

A STUDY OF THE POTENTIAL EFFECT OF AN AQUEOUS EXTRACT OF *CENTELLA ASIATICA* AS AN ANTIDEPRESSANT

Herbal preparations may be effective alternatives in the treatment of depression, which remains difficult to manage. For this purpose, *C. asiatica*, an oriental traditional medicine, has been screened for the potential antidepressant activity. The studies were carried out using male albino Swiss mice. The mice were randomly divided into four groups of five animals each. This study examined the antidepressive effect of aqueous extracts of *C. asiatica* primarily through the forced swimming test (FST) and secondarily through spontaneous locomotor activity test and behavioral test models. The first group received normal saline solution, while other three groups were administered different concentrations of aqueous *C. asiatica* extract solution. Different concentrations of *Centella asiatica* i.e. 100, 300, 500 mg/kg body weight were administered to the mice. All administrations were performed through intraperitoneal (i.p) injection to determine the acute (30 minutes) and chronic (1 week) effect after administration. The control group received normal saline solution in a similar method and period of time. The result suggests that the aqueous extract of *C. asiatica* may have potential antidepressant-like effects.

CHAPTER 1

INTRODUCTION

1.1 Depression

Depression is a potentially life-threatening disorder that affects hundreds of millions of people all over the world. It can occur at any age from childhood to late life and is a tremendous cost to society as this disorder causes severe distress and disruption of life and, if left untreated, can be fatal. The psychopathological state involves a triad of symptoms with low or depressed mood, anhedonia, and low energy or fatigue. Other symptoms, such as sleep and psychomotor disturbances, feelings of guilt, low self-esteem, suicidal tendencies, as well as autonomic and gastrointestinal disturbances, are also often present. Depression is not a homogeneous disorder, but a complex phenomenon, which has many subtypes and probably more than one etiology. It includes a predisposition to episodic and often progressive mood disturbances, differences in symptomatology ranging from mild to severe symptoms with or without psychotic features and interactions with other psychiatric and somatic disorders (Bondy, 2002).

Major depression is a serious disorder of enormous sociological and clinical relevance. The discovery of antidepressant drugs in the 1950s led to the first biochemical hypothesis of depression, which suggested that impairment in central monoaminergic function, was the major lesion underlying the disorder. Basic research in all fields of neuroscience (including genetics) and the discovery of new antidepressant drugs have revolutionized our understanding of the mechanisms underlying depression and drug