UNIVERSITI TEKNOLOGI MARA

EFFECT OF *MORUS NIGRA L.* LEAVES INFUSION ON DEPRESSION IN CAPTIVE MICE

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ABSTRACT

It is common for captive animal that live under human care to develop depression due to different in habitat, enclosure and climate from their origin. Mulberry is from *Moraceae* family which widely used in reducing fever and as hypoglycaemic agent. Currently, there is no research been conducted to investigate the effect of *Morus Nigra* (mulberry) to reduce symptom of depression in these animal. Hence, the aim of this study is to investigate possible antidepressant-like effect of mulberry leave infusion into mice. The mice were divided into two groups which are control group (n=6) given distilled water and mulberry group (n=6) given mulberry tea infusion 2.5% concentration. Body weight, water intake and food consumption of the mice were recorded throughout 14 days of experiment. Forced swim test was conducted on day 7 and day 14 to measure the potential antidepressant activity of mulberry tea. Result showed that there were no significant difference ($p>0.05$) in body weight, water intake and food consumption of the mice. In forced swim test, there were no significant effect ($p>0.05$) of mulberry tea infusion in reducing immobility time and increasing the latency to start immobile. These result suggested that mulberry tea infusion has no effect towards captive mice. However, there were limitations which contribute to the result of the study which were discussed in this research.

CHAPTER 1

INTRODUCTION

1.1 Background of study

Captive animal is termed as animal that live under human care such as farm animal, laboratory animal, pet or zoo animal (Ashmore & Nystrom, 2012). During captivity, animals may develop problem and difficulty to adapt with new environment especially wild animals. The animals may have limited opportunities to express their natural behaviour as in the wild and there could be over crowding of animals in small enclosures that limit the movement and physical activities of animals within the cage (Amber, 2011). Animal enrichment may be done in zoo and may help the animals to adapt new habitat. However, the enrichment do not enough to facilitate complex problem solving behaviour in animals (Meehan & Mench, 2007). Thus, this can give effect to the animals' behaviour.

Due to the problem that the animals experienced, it can lead them into depression. Depression in human was associated with feeling of loneliness and usually unrecognized and undertreated (Vann, 2012) (Mulsant & Ganguli, 1999). Animal depression can be noticed when they become inactive, withdrawn themselves from social and change their