

**UNIVERSITI TEKNOLOGI MARA**

**TEST OF MEMORY-ENHANCING RAISIN PRODUCT IN  
SWISS MICE BY USING RADIAL ARM MAZE**

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**2013**

## **ACKNOWLEDGEMENTS**

I would like to express the deepest appreciation to my supervisor, Mr. Richard Muhammad Johari James, who has spent his time and give his commitment regarding my research project. Without his guidance and persistent help, this dissertation would not have been possible.

I take this opportunity to record my sincere thanks to my beloved family and friends for their unceasing encouragement and support. Last but not least, I would like to express my sense of gratitude to one and all, who direct or indirectly, have lent their help and share the knowledge for my research project.

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## ABSTRACT

Memory is one of the most vital components in life and it is the process which information is encoded, stored and retrieved. Memory has become very important in daily life especially in learning. The fact that memory is very important have lead to the creation of product which might boost the memory. A lot of memory-enhancing product that which available in the market. In this study, one of the memory-enhancing products, product Y (which contain raisin as major ingredient) was used to know the effect especially in spatial memory improvement of mice. The performance of the mice was assessed using Radial Arm Maze (RAM). The dose for the product was determined based on body weight of the mice and two doses of product Y (200 mg/kg and 400 mg/kg) were used. The controls used were normal saline (negative control) and piracetam (positive control). The doses were given by force feeding into four different groups (five mice in each group) for 14 days. On the last three days of the two weeks treatment, the real RAM experiment was started. The result showed that piracetam had significant effect on the performance of the mice this study. This study does not really support the hypothesis that the product has positive effects in enhancing memory. The other experimental model might be used in order to achieve a better result.

# CHAPTER 1

## INTRODUCTION

### 1.1 Background of The Study

Memory is one of the most vital components in life. Memory is the process whereby information is encoded, stored, and retrieved. There are three stages by which firstly, the information is encoded from the outside world to reach the senses and it can be in the forms of chemical or physical stimuli. Secondly, the information is stored over periods of time. Thirdly is the retrieval of information that has been stored by calling back the stored information in response to certain cue for use in any process or activity. Memory can be stored over short or long time and it can influence activity of either human or animals.

Memory storage and cognitive function in the human brain includes mainly of the right and left cerebral hemispheres(Lekha et al., 2010). A lot of research and clinical observations have established that declarative memory, the ability to remember recently experienced facts and events, depends on hippocampus and also associated structures in the medial temporal lobe which include the entorhinal, perirhinal and parahippocampus cortexes.