

UNIVERSITI TEKNOLOGI MARA

**POTENTIAL OF HAB 14 (R3) AS AN
ANTIPILEPTIC AGENT**

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TABLE OF CONTENTS

	Page
TITLE	
APPROVAL	
ACKNOWLEDGEMENT	ii
TABLE OF CONTENTS	iii
LIST OF TABLES	v
LIST OF FIGURES	vi
ABSTRACT	vii
CHAPTER ONE (INTRODUCTION)	1
CHAPTER TWO (LITERATURE REVIEW)	5
2.1 GABA neurotransmitter	5
2.2 GABA receptor	6
2.2.1 GABA _A receptor	7
2.3 Epilepsy	8
2.3.1 Role of GABAergic inhibition	11
2.3.2 Therapy regarded to reduction of GABA _A neurotransmission	11
2.4 Picrotoxin mediated GABA _A inhibition	13
2.5 Fungal endopyhte	15
2.6 Introduction to <i>Cinnamomum zeylanicum</i>	15
2.6.1 Chemical composition and medicinal values	16
2.6.2 Scientific classification of <i>Cinnamomum zeylanicum</i>	18
2.7 HAB 14 (R3)	18
2.8 Studies on the other antiepileptic plants available in Malaysia	18

ABSTRACT

The aqueous endophyte extract of the root of *Cinnamomum zeylanicum* (HAB 14(R3)) was prepared and used as 25, 50 and 75 mg/5 ml. 46 white albino mice of both sexes weighing between 30 g and 40 g were used for this study. The results were compared to the negative control and previous study done by other researchers. The extract conferred 100% protection to mice treated with a convulsive dose of picrotoxin, indicating anticonvulsive effect. Thus, the results suggested that the aqueous endopyhte extract of the root of *Cinnamomum zeylanicum* possesses anticonvulsive properties in mice.

CHAPTER 1

INTRODUCTION

Epilepsy is a chronic and progressive brain disorder characterized by the periodic and unpredictable occurrence of seizure which may be generalized; originating simultaneously in both hemisphere of the brain or partial, originating in one or more parts of both hemispheres. Seizure itself can be defined as a disturbance of movement, feeling or consciousness occasioned by sudden, inappropriate and excessive electrical discharges in the grey matter of the brain. Basically the pathogenesis of seizure lies in four mechanisms involving; reduction in GABA_A neurotransmission; increase in Na²⁺ channel activity; increase in T-type Ca²⁺ channel activity and increase in NMDA receptor activity (Prince, 1978).

Epilepsy affects about 50 million people worldwide. In Asia, the median lifetime prevalence rate is estimated at six per 1000 people, which is lower than in other developing regions. However, the number of affected patients in the region is large and much remains poorly documented or unknown (Mac *et al.*, 2006). What distinguishes epilepsy in Asia from other regions is probably not so much on genetics or biological differences of Asians or environmental factors that influence the causes of symptomatic epilepsy, but most likely, the psychosocial, cultural, economic, organizational, and political factors that influence epilepsy causation, management, and outcome.