

**UNIVERSITI TEKNOLOGI MARA**

**PHYTOCHEMICAL STUDY OF *LOPHOPETALUM*  
*JAVANICUM***

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## ABSTRACT

*Lophopetalum javanicum* or also known as Perupok by Malaysian is commonly found in Laos, Thailand, Malaysia, Vietnam, India and Cambodia. The bark of this plant is traditionally used as a constituent of a dart poison and the timber is commonly used for paneling and plywood. This plant is a member of Celastraceae family which have many biological activities such as stimulant, sedation, anti-bacterial, insect repellent and anti-tumour (Alarcón et al. 2015). Only a few species of the genus *Lophopetalum* have been subjected for phytochemical study thus *Lophopetalum javanicum* species is the most suitable candidate for this research. Fraction no. 4 of chloroform extract was selected and column chromatography of this fraction yielded seven sub fractions. Out of seven sub fractions, fraction no. 5 was chosen for isolation and purification by using preparative TLC. Once the purity of the isolated compound was confirmed, the compound was subjected to  $^1\text{H-NMR}$  for identification of the chemical constituent. However, from this research, NMR analysis only showed the presence of long chain alcohol.

# CHAPTER 1

## INTRODUCTION

### 1.1 Introduction

Medicinal plants are continuously used by millions of people as medicines for diseases treatment and maintaining the world health since ancient times. According to World Health Organization (WHO), there are approximately 80% people worldwide dependent on the medicinal plants for some facial expression. The number of higher plants presence worldwide are about 270,000 but only small number has been studied scientifically and properly for pharmacological use (Ansari et al. 2015). The primary source for bioactive organic compounds isolation is the plants chemical diversity. The plants are anticipated to supply certain bioactive organic compounds to help in the development of “lead compound” for a treatment of diseases.

The Celastraceae species supply a large number of bioactive metabolites and it is widely used in the traditional medicine (Núñez et al. 2004). *Lophopetalum javanicum* is a plant species that is classified in the Celastraceae family. The bark is commonly used as the dart poison constituent (Md. Reyad-ul-Ferdous et al. 2014). By proper adjustment and