

UNIVERSITY TEKNOLOGY MARA

**ISOLATION AND IDENTIFICATION OF
OLIGOSTILBENOID FROM *NEOBALANOCARPUS HEIMII*
(DIPTEROCARPACEAE)**

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ABSTRACT

The leaves of *Neobalanocarpus heimii* was investigated for their oligostilbene contents. The powdered material was obtained from previous master students and was used for the research. Prior to isolation using HPLC, determinations of compounds for isolation were based on mass spectrometry. The method employed for the research is based on the established method and was modified to comply with different HPLC techniques such as preparative and analytical HPLC. The crude sample was injected into preparative HPLC and obtains two fractions which one of them is pure and another is impure. The impure fraction was further isolated using analytical HPLC and obtain two pure fraction. The pure fractions then were characterized using nuclear magnetic resonance (NMR). One galactopyranose and one oligostilbene, balanocarpol were identified.

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CHAPTER 1

INTRODUCTION

1.0 Introduction of the research

Dipterocarpaceae is a dominant family in the tropical rainforests. It is a higher plant family which is distributed in many parts of the world including Southeast Asia, Africa and some in South America. In this huge family, there are 470 species from 13 genera in Asian subfamily, 39 species from two genera in African and one genus in South America (Ashton, 1982).

Dipterocarpaceae family had served the human civilization for thousands of years. Due to their morphological attributes, they had been used as a source of timber in hardwood market in Asia (Ashton, 1998). Dipterocarpaceae is able to produce sustainable timber yield, as well as habitat conservation and other services and goods (Sist *et al.*, 2000). With increasing advance in technology, scientists are trying to capture valuable important compounds that are capable to treat human diseases. Despite being one of the oldest fields of science, natural product chemistry remains an active field of research. Various techniques in isolation of various compounds from natural resources especially plants has yet to meet its ending.