UNIVERSITI TEKNOLOGI MARA

PHYTOCHEMICAL INVESTIGATIONS OF *SALACIA MACROPHYLLA*

SITI SOFIAH BINTI ABDUL AHMAD

Dissertation submitted in partial fulfillment of the requirements for the Bachelor of Pharmacy (Hons) degree

FACULTY OF PHARMACY

JUNE 2014

ACKNOWLEDGEMENT

Alhamdulillah, praise be to Allah SWT for His blessings in allowing the completion of this thesis under the course PHC 567 as the research project for final year students of Bachelor of Pharmacy degree. I am truly grateful that I was able to finish this coursework successfully on time.

For that matter, I would like to express my deepest gratitude towards my supervisor, Dr Humera Naz who has been patiently and thought us all the way from the beginning until we managed to successfully complete this thesis. Her support and kindness along all the way of guiding us throughout this project are very much valued and appreciated. It will be remembered and treasured for a long time to come.

Besides that, I would also like to thank Madam Salwa for her help and guidance and also moral supports throughout our experiment procedures. She has been willingly to share with us her knowledge and experiences about the project.

Not to forget, I would also like to give my thanks to all the master students and laboratory officers who have been guiding us throughout the experimentation and on how to handle the instruments and chemicals correctly. Without all of them, it would be impossible to finish this project on time. There will be no available words that can be written to express my gratitude. All I can say is thank you very much to all who involves in assisting me throughout this coursework and may Allah repay you for your guidance and kindness InsyaAllah.

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ABSTRACT

Salacia macrophylla belongs to the Celastraceae family. This species comprises about 200 different species which are widely distributed in the world mainly in the tropical areas like India, Sri Lanka, Southern China and other Southeast Asian countries. This plant has been selected for this study as there had been many previous articles which record the medicinal values of the phytoconstitutents from Celastraceous plants. However, there is only one available journal which records the phytochemical investigation of *Salacia macrophylla.* Thus, the main purpose of this study is to find out the chemical constituents from the roots of *Salacia macrophylla.* One compound was successfully isolated as a result of this study. Column chromatography method was used to separate the compounds from the ethyl acetate extract of *S. macrophylla.* Purification and isolation was done by using preparative TLC. Identification of the isolated compound was done using the NMR technique.

CHAPTER 1

INTRODUCTION

1.1 Introduction

Since centuries, people use plants as a source of food, as shelter, and most importantly as oxygen supply of fresh air. Beyond that, plants have been extensively used as a source of drugs in treatment of ailments or illness. They serve great medicinal values in which people could benefit enormously from them. The importance of plants in the medicinal area had been realized by people all around the world since thousands of years ago. According to Uniyal (Uniyal, Singh, Jamwal, & Lal, 2006), there are more than 50,000 flowering plants out of 4,22,000 flowering plants from all around the world are used medicinally for treatment purposes.

In order to excerpt out the goodness of the medicinal plants, scientists do extraction and isolation to identify the compounds which are responsible for the medicinal values. Generally, some of the compounds which serve those values include triterpenes, quinonemethides, flavonoids and several types of alkaloids. Celastraceae, which is the family of the species of interest in this study, comprised of many of the mentioned compounds. This family is known to be a source of important bioactive secondary metabolites which include sesquiterpenes, diterpenes and triterpenes (A. González,