

UNIVERSITI TEKNOLOGI MARA

EXTRACTIONS OF TWO *VITEX* SPECIES

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**Dissertation submitted in partial fulfilment of the requirements for the
Bachelor Of Pharmacy (Hons)**

Faculty of Pharmacy

2015

ACKNOWLEDGEMENTS

Alhamdulillah, with the permission and blessing of Allah S.W.T, the Most Merciful and the Most Gracious, this thesis can be completely done in the given time. This thesis reflects the hard work of many people contribute to it. Here I want to depress my deepest thanks to numerous people who have contributed to the completion of this thesis.

I want to express an extremely indebted and thankful to my supervisor Dr. Ibtisam Abdul Wahab and my co-supervisor Dr. Hannis Fadzillah Mohsin for all the support, guidance, advice and knowledge that they gave throughout the research period. I greatly appreciated it.

I am also grateful to the coordinator for PHC 567 course Dr. Shihabuddin Ahmad Noorden for his guidance and support from the beginning until this thesis was completely done.

I wish to thank to Cik Nur Jannah and Encik Muhd Syukri for their guidance throughout my lab works.

My biggest thanks to my other group members, Abdul Rasyid Bin Zulkifli, Muhammad Faxrurrazy Bin Sadiran and Fairus Nadiana Binti Saudi. With their help and support, I could finish the research successfully.

Last but not least, my precious thanks to my family and all my friends for their support and encouragement. Also to all that I may not list it. Thank you very much.

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ABSTRACT

Vitex species is known world widely as a medicinal plant and it has many therapeutical benefits. *Vitex trifolia* and *Vitex negundo* were selected for this research due to their availability and various chemical constituents. This research was performed to investigate the chemical constituents of *Vitex trifolia* and *Vitex negundo* by isolation, purification and identification of its chemical constituents. Isolation of the methanol and ethanol extracts were done by using Preparative Thin Layer Chromatography. The compounds of interest were subjected to purification in order to obtain only pure compounds, without the impurities. A pure compound was introduced to the Nuclear Magnetic Resonance (NMR) spectroscopy technique and ¹H-NMR analysis was performed to identify its chemical structure. Finally, the chemical compound that was isolated from the leaves of *Vitex trifolia* was determined as agnuside.

CHAPTER 1

INTRODUCTION

1.1 Introduction

For thousand years, natural products have been a source of medicinal agents and an impressive number of modern drugs find their origin innatural products. Natural product chemistry has experienced explosive and diversified growth, making natural products the subject of much interest in the present day research directed towards drug design and discovery. It is noteworthy that natural products are a source of new compounds with diversified chemical constituents possessing interesting pharmacological or biological activities (Tiwari, Thakur et al. 2013). Various medicinal plants have been identified and modern scientific approach have been used to study their authenticity, safety and efficacy of their therapeutic use (Meena, Niranjana et al. 2011). However, herbal remedies and traditional medicine are still been presently used for some aspect of primary health care.

Most of the studies done previously learned that *Vitex* species contain a variety of potentially bioactive molecules, such as iridoids, flavonoids, diterpenoids, derivatives, and phytosteroids that can be used in traditional medicine to cure wide range of ailments,