

ABSTRACT

Chemical investigation of *Vitex capitata*, *Roupala montana* and *Pouzolzia occidentalis* from Trinidad

Marie L. Mohammed

Section 1 of this thesis deals with the chemical investigation of *Vitex capitata*.

Chapter 1 reviews the various compounds previously found in *Vitex* species and focuses on the biologically active components.

In **Chapter 2** a detailed phytochemical study on the leaves of *Vitex capitata* is reported. Two known ecdysteroids as well as two known dicaffeoyl quinic acids were isolated. The isolation and structure elucidation of these compounds are discussed.

Chapter 3 discusses the chemical investigation of the stem and bark of *Vitex capitata* from which two other known ecdysteroids were isolated and characterized.

Section 2 of the thesis describes the chemical investigation of *Roupala montana*.

Chapter 4 reviews the compounds previously isolated from the *Roupala* genus and describes the isolation and characterization of two known flavonoid diglycosides from *Roupala montana*.

Section 3 of the thesis discusses the phytochemical investigation of *Pouzolzia occidentalis* leaves.

In **Chapter 5** a review of compounds belonging to the family Urticaceae is presented. In addition, the isolation and characterization of three novel norlignans are described.

Keywords: *Vitex capitata*, *Roupala montana*, *Pouzolzia occidentalis*, ecdysteroids, dicaffeoyl quinic acids, flavonoid diglycosides, norlignans.

Words can hardly express my deep sense of gratitude and indebtedness to my

Also, I wish to thank Dr. R. S. Panarwak for his foresight and guidance in this project. His assistance, support and understanding are appreciated.

I express my unwavering gratitude to the members of staff at the Department of Chemistry, The University of the West Indies, St. Augustine for the crucial role they played in my educational development. To the many technicians and office staff I say thank you for the assistance extended in many ways.

In addition, I greatly appreciate the invaluable assistance of Mr. Winston Johnson and the staff of the National Herbarium at UWI St. Augustine, in collecting and identifying the plants.

I am also grateful to Professor W.F. Reynolds of the University of Toronto for providing NMR spectral data and for guidance in structure elucidation. For the provision of mass spectral data, I thank Dr A. Young also of the University of Toronto.

I owe thanks to The University of the West Indies for financial assistance during this project in the form of a postgraduate scholarship.