

ABSTRACT

CHEMICAL INVESTIGATION OF SOME TRINIDAD *PIPER* SPECIES

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This dissertation deals with the structure elucidation of the various natural products isolated from some Trinidad *Piper* species. Chapter 1 reviews the existing literature on the secondary metabolites from the genus *Piper*, while Chapters 2 - 7 describe the phytochemical investigation of selected *Piper* species. The aerial parts of the various plants were dried, ground and extracted with acetone. The resultant crude extract of each plant was repeatedly chromatographed to yield purified compounds which were identified by spectroscopic methods. In Chapter 2, the investigation of *P. guayranum* resulted in the isolation of the known alatamide, as well as the acetate of tembamide which has not been previously isolated as a natural product. Chapter 3 describes the isolation of the newly discovered 3-farnesyl-4-hydroxybenzoic acid and its previously unknown methoxy derivative from *P. marginatum*. Next, in Chapter 4, the investigation of *P. saltum* is discussed.

This yielded three novel prenylated hydroxybenzoic acids, designated as compounds I, J and K. Chapter 5 comprises the isolation of a new dihydrocinnamoyl 2-pyrrolinone amide from *P. demeraranum*. In addition, the three hydroxybenzoic acids obtained from *P. saltuum* were also isolated from *P. demeraranum*. Chapter 6 consists of the isolation and characterisation of the known 3-geranyl-4-hydroxybenzoic acid and a novel chromanone (designated as compound S) from *P. dilatatum*. This is followed by the final Chapter which discusses the investigation of *P. rugosum*. This yielded the known dimer of piplartine and the previously unreported dihydro derivative of piplartine.

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