

## ABSTRACT

This thesis describes the isolation and characterization of triterpenes from *Quassia multiflora* (A. Juss.) Nootboom, bisabolane sesquiterpenes, pseudopteranes and a seco-sterol from *Pseudopterogorgia* species of Caribbean origin and lastly of a novel alkaloid from an *Axinella* species. Additionally this work shows the importance of 2D-NMR spectroscopy as an invaluable tool in structural elucidation of natural products.

Part one of this thesis describes the isolation and characterization of four squalene derived triterpenes, quassiols A, B, C and D and a glabretal triterpene from the Guyanese *Q. multiflora* (A.Juss.) Nootboom.

Part two is subdivided into three sections. Section one highlights the isolation and characterization of the bisabolane sesquiterpene (-)-curcuhydroquinone from Barbadian *Pseudopterogorgia acerosa* extracts.

Section two describes the isolation and characterization of a further four bisabolane sesquiterpenes, (-)-curcuhydroquinone-1-monoacetate, (-)-curcuhydroquinone diacetate, (-)-curcuphenol acetate and (-)-curcuquinone and the seco-sterol F from extracts of a Barbadian variety of *P. americana*.

Section three describes the isolation and characterization of the novel compound 11-gorgiacerol, along with three other pseudopteranes, namely gorgiacerodiol, isogorgiacerodiol and pseudopterolide from a Tobagonian variety of *P. acerosa*.

Part three of this work describes the isolation, characterization and structural elucidation of the novel alkaloid axinellamide from extracts of an *Axinella* species collected off Nelson Island, Trinidad.