

**CHEMISTRY OF *PIPER DISCOLOR*
AND *CINNAMODENDRON* SPECIES OF JAMAICA**

A Thesis

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ABSTRACT

Chemistry of *Piper discolor* and *Cinnamodendron* species of Jamaica

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This dissertation is divided into two parts. Part I, which constitutes chapters 1, 2 and 3 focuses, on plants from the genus *Piper*, while part II, which comprises chapters 4 and 5, focuses on the *Cinnamodendron* species.

Chapter 1 is a comprehensive review of the genus *Piper*. It highlights the categories of compounds, including their sources, which have been isolated from *Piper*. Their biological activities are also described. Chapter 2 focuses on all the known Jamaican *Piper* species and the compounds that have been previously isolated from them. Chapter 3 deals with the isolates from this study. These include four lignans, two of which are novel, a derivative of one of these lignans as well as a plant steroid. Isolation and structure elucidation was accomplished mainly through the use of column chromatography and nuclear magnetic resonance experiments. This chapter also includes a comparative discussion of the data obtained for these compounds and compounds of the same category that were previously isolated. Chapter 4 is a review of the Canelleceae family and drimane sesquiterpenes. Chapter 5 describes the only isolate of *Cinnamodendron* species

nova, a known drimane dialdehyde, and compares the essential oil composition of the two *Cinnamodendron* species that are known to occur in Jamaica.

Keywords: Piperaceae, *Piper discolor*, Canellaceae, *Cinnamodendron*, drimane sesquiterpenes, lignans, essential oil, Jamaica