

ABSTRACT

The Characterization of Tetranortriterpenoids (Limonoids)

of *Swietenia mahagoni* (Meliaceae)

Deon Lucrecia Lyder

The objective of this work is two-fold.

- (i) To review the family Meliaceae with emphasis on structurally diverse limonoids.
- (ii) To report on the isolation and structure elucidation of the limonoids obtained from the seeds of *Swietenia mahagoni*.

Chapter One is a literature review outlining different structural types of limonoids; namely intact limonoids, ring cleaved derivatives, rearranged limonoids, norlimonoids and degraded limonoids. These are widely distributed throughout many genera including *Swietenia*, *Turraea*, *Azadirachta*, *Melia*, *Chisocheton*, *Walsura* and *Khaya*.

Chapter Two describes the chemical investigation of the seeds of *Swietenia mahagoni*, from which thirteen compounds (compounds A-C, E-N) were isolated. The monoacetate (compound D) of compound C was also prepared. This is the first report of compounds H-J, L and N.

Keywords: Deon Lucrecia Lyder, Meliaceae, *Swietenia mahagoni*, secondary metabolites, tetranortriterpenoids, limonoids, triterpenes.