

A B S T R A C T.

Part 1 of this thesis consists of a review of the tetranortriterpenoids (limonoids) which have so far been found occurring naturally in the Meliaceae and Rutaceae. In Chapter one the biogenetic derivation of limonoids from a tetracyclic triterpene precursor is discussed. A discussion of the biogenetic relationship among limonoids is also given. In Chapter two a brief review of the chemistry of the carbocyclic ring D limonoids and the spectroscopic data leading to their structural elucidation is presented.

Part 2 presents the correlation of hirtin and anthothecol, by way of conversion of both to a common deoxycompound. In Chapter one an unusual reaction in hirtin chemistry, namely the halogenolysis of the C-4 methoxycarbonyl group is discussed. This reaction was of immense importance in the correlation studies. Chapter two outlines model experiments leading up to the correlation. The actual correlation is presented in Chapter three. Also discussed in this last Chapter are attempts made to correlate anthothecol and cedrelone.