

ABSTRACT

A Chemical Investigation of *Lenzites repanda* and *Botryodiplodia theobromae*.

Nicole Olivierre

In Chapter 1, the fungal kingdom is introduced with an outline of the major features governing fungal classification and highlights of the diverse applications of fungi by man. Fungal secondary metabolites are overviewed with emphasis on steroids and fatty acids.

The investigation of *Lenzites repanda* is contained in Chapter 2. An introduction to the organism is presented, followed by a review of the secondary metabolites previously isolated from *Lenzites* species. A detailed account of the isolation and identification of the ergostane derivatives ergosta-7,22-dien-3 β -ol, ergosterol peroxide and ergosta-7,22-dien-3 β ,5 α ,6 β -triol and the triterpene taraxer-14-en-3-one is presented with full assignment of NMR data.

The work done on *Botryodiplodia theobromae* is detailed in Chapter 3. An introduction to the organism is followed by a review of the secondary metabolites previously isolated from the genus *Botryodiplodia*. This is followed by details of the medium composition and fermentation conditions chosen for this study. Details of the isolation of a cholic acid derivative from the fermentation broth and a long chain fatty acid and a glycerol derivative from the mycelia are presented.

Keywords: Nicole T. Olivierre; *Lenzites repanda*; *Botryodiplodia theobromae*; ergosterol peroxide; ergosta-7,22-dien-3 β -ol; ergosta-7,22-dien-3 β -5 α -6 β -triol; taraxerone; taraxer-14-en-3-one; fungi; badisiomycetes; NMR; fermentation.

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