

**PHYTOCHEMICAL ANALYSIS OF**  
**CAPRARIA BIFLORA AND CLEOME SPINOSA;**  
**TRANSFORMATION OF *HYPTIS VERTICILLATA* TERPENES**  
**BY *CURVULARIA LUNATA* ATCC 12017**

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**ABSTRACT**

The work described within this thesis covers two general areas and as such the document is divided into two sections. In Part 1 (Chapters 1-3) the transformations of readily available terpenes (mainly sesquiterpenes) obtained from the plant *Hyptis verticillata* (locally known as John Charles) as well as their synthetic derivatives by the fungi *Curvularia lunata* and *Mucor plumbeus* are described. This work was done in order to produce certain chemically inaccessible analogues while at the same time investigating, indirectly, the enzyme systems in these microorganisms responsible for terpene metabolism. In Part 2 (Chapters 4-7) the results of the phytochemical investigation of two plants: *Capraria biflora* (Scrophulariaceae) and *Cleome spinosa* (Capparaceae) are reported. Chapters 1, 4 and 6 are reviews that were deemed relevant to the work undertaken. Reactions performed by each fungus on various substrates