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