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Synthesis of Some Novel Optically Active Isocoumarin and 3,4-Dihydroisocoumarin Containing L-valine and L-leucine Moieties

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Keywords
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Abstract: Phthalic anhydride was reacted with L-Valine and L-Leucine in a mixture of acetic acid and pyridine at room temperature, and then was refluxed at 90-100 °C and N-phthaloyl-L-valine or N-phthaloyl-L-leucine were obtained in quantitative yields. The imide-acids were converted to N-phthaloyl-L-valine acid chloride and N-phthaloyl-L-leucine acid chloride by reaction with thionyl chloride. Then 2 new derivatives of the chiral isocoumarin with L-valine and L-leucine moieties were synthesised by the condensation reaction of homophthalic acid with respective imide-acid chloride. Furthermore these isocoumarins were converted to 2 new chiral substituted 3,4-dihydroisocoumarins. Biological screening tests reveal that the compounds (3a, 9a) have not potential as antifungal activity against Candida albicans and aspergillus niger.

Key Words: Isocoumarin, Dihydroisocoumarin, Homophthalic, Amino acid

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