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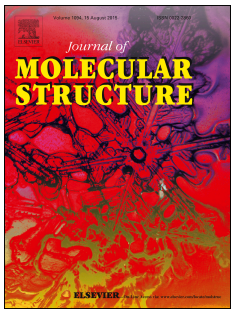

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Prospective new amidinothiazoles as leukotriene B4 inhibitors

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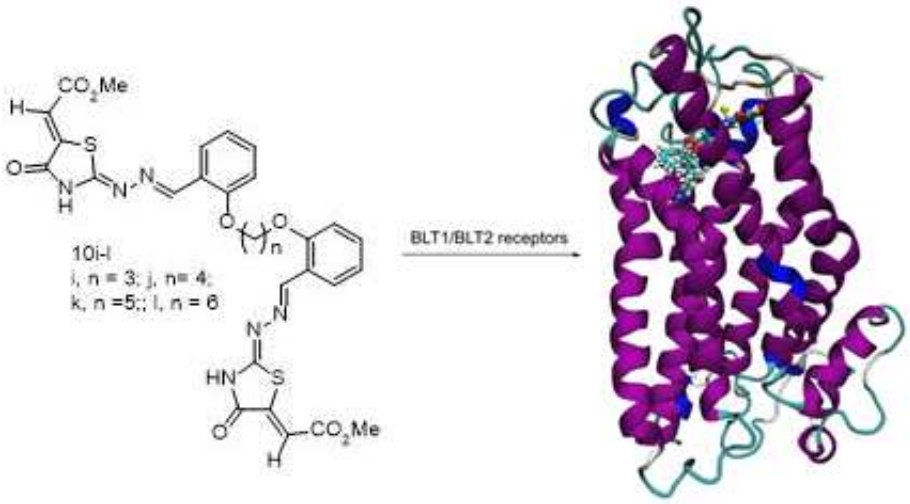

Abstract An efficient and one-step synthesis of the versatile, hitherto new derivatives resembling LY293111, a prospective potent antagonist of the leukotriene B4 (LTB4) receptor, were reported. The strategy was based on the synthesis of an amidinothiazole ring, connected with phenoxy group. The synthesized compounds were structurally confirmed by IR, NMR (including 2D-NMR), mass spectra and elemental analyses as well. The binding sites of LTB4 receptors –namely BLT1 and BLT2 were identified. Docking results suggested that some amidinobisthiazol-4-ones have potent activities towards BLT1 and BLT2 receptors.

Keywords: Thiosemicarbazones, Thiazoles, Molecular Docking, MM-GBSA Binding energies, BLT1 and BLT2 receptors.

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1. Introduction

Leukotriene B4(LTB4), which is identified as (6*Z*,8*E*,10*E*,14*Z*)-(5*S*,12*R*)-5,12-dihydroxy-eicosa-6,8,10,14-tetraenoic acid, **I** (Figure 1), is rapidly generated from membrane