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Preparation, Structure Elucidation, HAS Interaction and Molecular Docking Investigations of Benzothiazole Derived Schiff Base Ligands

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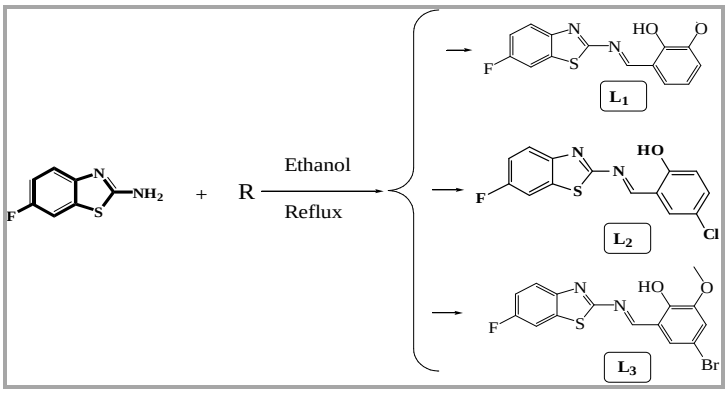
ABSTRACT

Herein we report the synthesis of benzothiazole derived Schiff base ligandssuch as 2-((E)-(6-fluorobenzo[d]thiazol-2-ylimino)methyl)-6-methoxyphenol (L_1), 4-chloro-2-{(E)-[(6-fluoro-1,3-benzo thiazol-2-yl)imino]methyl}phenol(L_2),(E)-1-(5-bromo-2-methoxyphenyl)-N-(6-fluoro1,3 benzothiazol-2-yl) methanimine (L_3). The prepared molecules were characterized using FT-IR, UV-Visible, NMR and mass spectroscopy. The analytical results revealed the structural information. Further, these molecules were investigated for Human serum albumin (HSA) binding, which showed that the probable mode of interaction strategy is found to be a static quenching process.

Graphical Abstract



Schematic representation for the synthesis of Schiff base ligands

Keywords: Schiff base, Spectroscopy, HAS interaction, Molecular docking.