



Synthesis, Characterization and Biological Studies of Novel Series of Triazolyl Schiff Bases Bearing Thiazole Moiety and their S-Derivatives

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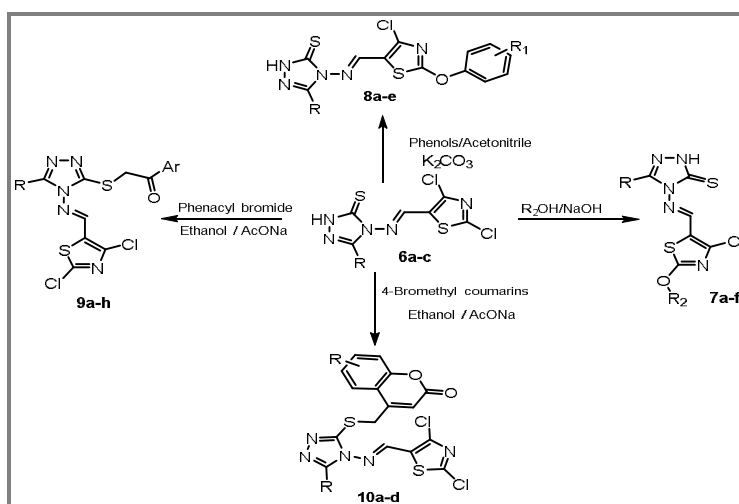
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ABSTRACT

The condensation of 5-substituted-3-mercapto-1,2,4-triazoles with 2,4-dichloro-1,3-thiazole in ethanol solvent containing catalytic amount of sulfuric acid afforded novel series of 5-substituted-[(2,4-dichloro-1,3-thiazol-5-yl)methylidene]amino-1,2,4-triazole-3(4H)-thiones (6). These compounds (6) were further derivatized through substitution of the chlorine atom at the 2nd position of thiazole ring with aliphatic alcohols/phenols and through substitution on SH group of 1,2,4-triazole moiety with phenacyl bromides/4-bromomethylcoumarins to afford novel series of alkoxy-(7)/phenoxy-(8 / and S-substituted (9/10) Schiff base derivatives respectively. The structures of the newly synthesized compounds were confirmed by their ¹H-NMR, IR, Mass spectral and analytical data. All the new compounds were screened for their antibacterial and antioxidant activities.

Graphical Abstract



Novel series of Schiff bases of 1,2,4-triazole bearing 1,3-thiazole derivatives.

Keywords: Antibacterial activity, Antioxidant activity, Schiff bases, S-alkyl derivatives, 1, 2, 4-Triazoles.