



Synthesis, Characterization and Antimicrobial Activities of Some Novel Thiazoles and Thiazolo-[3,2-*b*]-[1,2,4]-triazole Derivatives

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Accepted on 3rd May 2015

ABSTRACT

*The reaction of 2-(aryloxymethyl) benzo thioamide with various substituted phenacyl bromides afforded 2-[2-(aryloxymethyl)-phenyl]-N'-[4-(aryl)-thiazol-2yl]-benzohydrazide derivatives. The benzothiamide is prepared from corresponding hydrazide in KSCN/HCl in methanol. Substituted thiazolo-[3,2-*b*]-[1,2,4]-triazole derivatives were synthesized by a condensation reaction of the one pot three component reaction of substituted aromatic aldehydes and monochloroacetic acid in acetic acid in the presence of acetic anhydride and anhydrous sodium acetate with 5-{2-[(aryloxymethyl)-methyl]-phenyl}-4H-[1,2,4]-triazole-3-thiol. All structures of the newly synthesized compounds were elucidated by elemental analysis and spectral data. The new compounds have been tested for their in vitro antimicrobial activities. However, they shown moderate to good antimicrobial activity. Among the tested compounds **3h**, and **5d** shown significant antibacterial activity while **3d**, **3h** and **5d** shown significant antifungal activity.*

Keywords: Multi component reaction, [1,2,4]-Triazole-5-thione, Antimicrobial activity, 2-(aryloxy methyl) phenyl moiety.
