

## ABSTRACT

The current research work was initiated through the reaction of 4-methoxybenzoic acid (**1**) with ethanol (**2**) in the presence of conc.  $\text{H}_2\text{SO}_4$  to produce Ethyl 4-methoxybenzoate (**3**). Ethyl 4-methoxybenzoate further treated with hydrazine (**4**) hydrate to produce 4-methoxybenzohydrazide (**5**) in the presence of methanol solvent. This compound then further treated with phenylisothiocyanate (**6**) to acquire uncyclized intermediate triazole. Finally, this product was treated with 10% aqueous NaOH solution to get parent compound 5-(4-methoxyphenyl)-4-(4-nitrophenyl)-4*H*-1,2,4-triazole-3-thiol (**7**). This parent compound was derivatized by the reaction with 2-bromo-*N*-(2,6-dimethylphenyl) acetamide (**8**) in the presence of DMF and an activator lithium hydride which gave the final product *N*-(2,6-dimethylphenyl)-2-((5-(4-methoxyphenyl)-4-(4-nitrophenyl)-4*H*-1,2,4-triazol-3-yl) thio) acetamide (**9**). The structure of synthesized compound confirmed through IR,  $^1\text{H-NMR}$ ,  $^{13}\text{C-NMR}$  and EIMS analytical techniques.