

ABSTRACT

- The contemporary research project was initiated by the preparation of parent compound 5-((4-chlorophenoxy)methyl)-4-(4-nitrophenyl)-4H-1,2,4-triazole-3-thiol through the reaction of 2-(4-chlorophenoxy)acetohydrazide and 4-nitrophenylisothiocyanate . This compound was further treated with 3-bromo-N-(3,4-dimethylphenyl)propanamide in the presence of aprotic solvent using lithium hydride which work as activator to achieve 3-((5-((4-chlorophenoxy)methyl)-4-(4-nitrophenyl)-4H-1,2,4-triazol-3-yl)thio)-N-(3,4-dimethylphenyl)propanamide.

The structure of novel molecule was elucidated by $^1\text{H-NMR}$, and $^{13}\text{C-NMR}$ spectral techniques. Triazoles expose a lot of pharmacological applications which include anti-bacterial, anti-cancer, anti-inflammatory, anticonvulsant, antioxidant, antimicrobial, antifungal and work as inhibitors of various enzymes.