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# Synthesis and Biological Evaluation of some new Azetidin-2-one and Thiazolidin-4-one Derivatives

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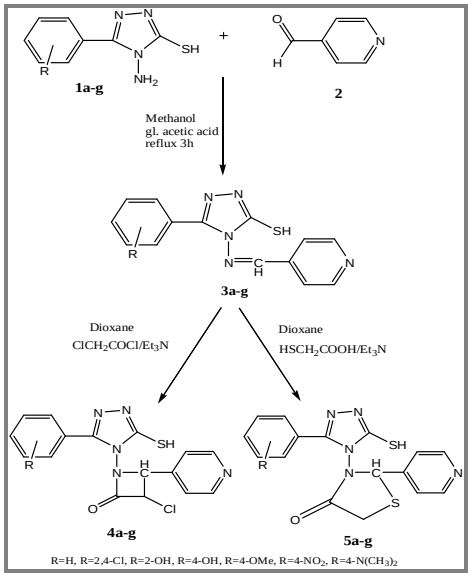
## ABSTRACT

*4-amino-5-substituted aryl-3-mercapto-1,2,4-triazole (3a-g) were used as key synthons for the preparation of 3-chloro-1-(3-mercapto-5-phenyl-4H-1,2,4-triazol-4-yl)-4-(pyridine-4-yl)azetidin-2-one (4a-g) and 3-(3-mercapto-5-phenyl-4H-1,2,4-triazol-4yl)-2-(pyridine-4-yl)thiazolidin-4-one (5a-g) was synthesized in order to determine their antimicrobial activity. The compounds were synthesized in good yield and the structures of newly synthesized compounds were established on the basis of their IR, $^1$HNMR and elemental analysis. The synthesized compounds were tested in vitro antibacterial activity against B. subtilis, S. aureus, Enterobacter, K. pneumonia and antifungal activity against T. indica, Tricoderma, S. fuliginea and P.infestans by measuring the zone of inhibition in mm.*

## Graphical Abstract




Synthesis of 4a-g and 5a-g.

**Keywords:** Substituted 1, 2, 4-Triazole, Pyridine Aldehyde, Schiff's base, Biological activity.