

## SYNTHESIS AND CHARACTERIZATION OF MONO/BIS $\beta$ - LACTAMS BY USING [2+2] CYCLOADDITION REACTION AND STUDY ANTIHYPERGLYCEMIC ACTIVITY

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### ABSTRACT

This study is concerned with the synthesis of 3-phenylthio/3 phthalimido mono/bis azetidine-2-one compounds from (phenylthio aceticacid/phthalimido aceticacid with appropriate Schiff's bases using  $\text{POCl}_3$  and  $\text{Et}_3\text{N}$  in  $\text{CH}_2\text{Cl}_2$  under  $\text{N}_2$  atmosphere and characterization of these compounds by IR, UV, Mass,  $^1\text{H-NMR}$ ,  $^{13}\text{C-NMR}$ . and study anti hyperglycemic activity for 2, 2'-(1, 1'-(1, 4-phenylene) bis (2-(4-(dimethylamino) phenyl) - 4 - oxoazetidine- 3, 1-diyl)) diisoindolin-1, 3-dione (**3d**). used rats (*Rattus norvegicus*) injected with Alloxan, Alloxane a beta-cytotoxin induces chemical diabetes through damage of insulin secreting cells. test compound (**3d**) significantly lowered the serum glucose levels indicating their anti-hyperglycemic activity.

**KEYWORDS:** Damage of Insulin Secreting Cells, Monobactams, Appropriate Aldehydes



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