



## **Synthesis, Characterization and Biological Studies of Thiadiazepine Derivatives of Sultams**

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### **ABSTRACT**

*The synthesis and characterization of new series of thiadiazepine derivatives of sultams have been presented. The structures were confirmed by elemental analysis, IR spectral, <sup>1</sup>H NMR spectral data. All the compounds were screened for in vitro antimicrobial and anthelmintic activities. The antibacterial activity was tested against Staphylococcus aureus (Gram positive), Bacillus cereus (Gram positive), Escherichia coli (Gram negative) and Pseudomonas aeruginosa (Gram negative). The antifungal activity was tested against Aspergillus niger and Candida albicans. All the compounds showed considerable antimicrobial activity against the microorganism studied. The significant anthelmintic activities of all novel compounds were demonstrated against Pheretima posthuma. Based on the nature of substituent present, the structure-activity correlation of novel compounds was discussed.*

**Keywords:** Thiadiazepine, Sultam, Antimicrobial, Anthelmintic.

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