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# Synthesis and Antimicrobial Evaluation of Some Novel Sulfonamide Derivatives Containing Oxazole Moiety

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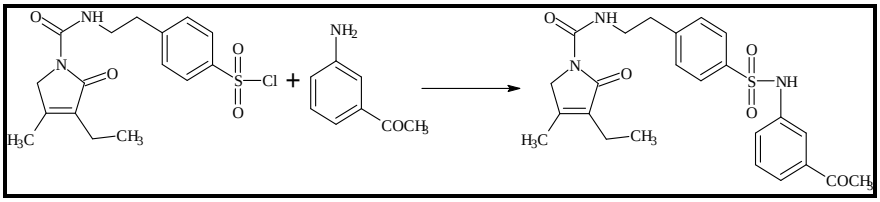
## ABSTRACT

*Some oxazole containing sulfonamide analogs have been synthesized by reaction of 4-(2-{[(3-ethyl-4-methyl-2-oxo-2,5-dihydro-1H-pyrrol-1-yl) carbonyl] amino} ethyl) benzenesulfonyl chloride with 3-aminoacetophenone in acetone for 36 h, which afforded N-(2-{4-[(3-acetylanilino)sulfonyl]phenyl} ethyl)-3-ethyl-4-methyl-2-oxo-2,5-dihydro-1H-pyrrole-1-carboxamide. Different anilines were treated with hydrochloric acid giving aniline hydrochloride, which on further reaction with urea resulted in various phenyl ureas.N-(2-{4-[(3-acetylanilino)sulfonyl]phenyl}ethyl)-3-ethyl-4-methyl-2-oxo-2,5-dihydro-1H-pyrrole-1-carboxamide i.e., sulfonamide was reacted with different phenyl urea's in presence of iodine to form oxazoles, which were recrystallized from ethanol. As-synthesized oxazole derivatives were characterized by different techniques. The antimicrobial activity of as-synthesized compounds was tested against (gram-negative bacteria) Escherichia coli, and (gram-positive bacteria) Staphylococcus aureus.*

## Graphical Abstract




Synthesis of N-(2-{4-[(3-acetylanilino)sulfonyl]phenyl}ethyl)-3-ethyl-4-methyl-2-oxo-2,5-dihydro-1H-pyrrole-1-carboxamide.

**Keywords:** 4-(2-{[(3-ethyl-4-methyl-2-oxo-2,5-dihydro-1H-pyrrol-1-yl) carbonyl] amino} ethyl) benzenesulfonyl chloride, 3-aminoacetophenone, aniline hydrochloride, urea.