



Syntheses and Antimicrobial Activities of 2, 3-Disubstituted-4-Thiazolidinone Derivatives

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SUMMARY. Ten new 4-thiazolidinone derivatives have been synthesized from the alkanolic acids. Alkanolic acid hydrazides (I) on refluxing with aromatic aldehydes in the presence of a catalytic amount of glacial acetic acid in methanol furnish corresponding hydrazones (II). Thioglycolic acid react with (II) in methanol yield the title compounds (III). These 4-thiazolidinone derivatives were characterized by CHN analysis, IR and ¹H NMR spectral data. All the compounds were evaluated for their *in vitro* antimicrobial activity against two Gram negative strains (*Escherichia coli* and *Pseudomonas aeruginosa*) and two Gram positive strains (*Bacillus subtilis* and *Staphylococcus aureus*) and fungal strain *Candida albicans* and *Aspergillus niger*. All newly synthesized compounds exhibited promising results.

KEY WORDS: Antimicrobial activity, Synthesis, 4-thiazolidinone.

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