

Synthesis and in-Vitro Biological Activity of Novel Gallic Acid Derivatives

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Abstract : A diversity of biological activities and pharmaceutical uses have been attributed to gallic acid derivatives such as antibacterial, anticancer, anti inflammatory. A series of gallic acid derivatives were synthesized, and their structure was confirmed by FT-IR, HNMR, CNMR, elemental analysis. In vitro biological activity of compounds was determined against *Proteus vulgaris* ATCC 7829, *Escherichia coli* ATCC 25922, as (Gram-negative) bacteria and *Bacillus cereus* ATCC 11778, *Staphylococcus aureus* ATCC 6538 as (Gram-positive) bacteria. Antibacterial susceptibility tests were done by use of the paper disc diffusion method on Mueller Hinton agar (Merck). Chloramphenicol, Penicilline, Streptomycin and Tetracycline were standard reference antibiotics. The zone of inhibition against bacteria was measured after 24 hours at 37 °C. Compounds 3, 4, 5 were the main antibacterial compounds against Gram-negative bacteria but not Gram-positive.

Keywords : gallic acid derivatives, antibacterial, antibiotics, inhibition

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