

Synthesis and biological evaluation of novel 3,4,5-trihydroxy benzoic acid derivatives

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Abstract

A diversity of biological activities and pharmaceutical uses have been attributed to phenolic acid derivatives such as antibacterial, anticancer, antiinflammatory (1-3). A series of 3,4,5-trihydroxy benzoic acid derivatives were synthesized and their structure confirmed by FT-IR, ¹HNMR, ¹³CNMR, 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.

1,2,3,4-Tetrasubstituted Pyrroles"; ChemistrySelect – Vol 4 Issue 10 - 2019

3. "Synthesis and antibacterial activity of some novel sebacic acid derivatives" - Journal of Chemical and Pharmaceutical Sciences – Vol 12 Issue 01 – 2019

4. "Synthesis and Biological Evaluation of Some Novel 2-Pyrazinoic Acid-derived Esters" - Letters in Organic Chemistry – Vol 16 Issue 5 – 2019

5. Green synthesis of water-soluble graphene nanosheets under solvent-free condition and in-situ anchored with MnO₂ as supercapacitor - Journal of Materials Science Materials in Electronics – Vol 29 Issue 8 – 2018

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Biography:

Hossein Mostafavi is working at Department of Organic Chemistry & Biochemistry Faculty of Chemistry, University of Tabriz and he published number of articles in number journals.

Speaker Publications:

1. "Thiourea Derivatives Based on the Dapsone-Naphthoquinone Hybrid as Anticancer and Antimicrobial Agents: In Vitro Screening and Molecular Docking Studies"; Chemistry Select – Vol 5, Issue 2 -2020
2. "Magnesium Incorporated White Sandstone as a Green and Efficient Heterogeneous Catalyst for One-Pot Synthesis of