http://ajms.co.in/sites/ajms2015/index.php/ajms/article/view/1402

Synthesis and Characterization of Some New 2,4,6-Trisubstituted Pyrimidines and Biological Evaluation as Anti-Bacterial Activities Agents

Ali Kareem Alywee

Chemistry Department, Education College for Women, Anbar University

Email:d.alikareem@yahoo.com

Abstract: Chalcone derivatives (C1-C16) were prepared by condensing substituted 2,4-Dihydroxyacetophenone in position 5 with various substituted aromatic aldehydes according to Aldol condensation. These chalcones were reaction with guanidine hydrochloride under basic alcoholic conditions gave 2,4,6-trisubstituted pyrimidines (D1-D16) in quantitative yields. All the newly synthesized pyrimidines were characterized by means of IR, 1H-NMR and elemental analyses and they were evaluated for antibacterial activity against both gram positive and gram negative organisms by in vitro. 4-(2-amino-6-(2-hydroxy-5-((2-nitrophenyl)diazenyl) phenyl) pyrimidin-4-yl)-6-nitrobenzene-1,3-diol (D11) and 4-(2-amino-6-(2-methoxy-5-((2-nitrophenyl)diazenyl)phenyl)pyrimidin-4-yl)-6-nitrobenzene-1,3-diol (D12) were found to be the most potent antibacterial activity compared with streptomycin as reference standard.

Keywords: Pyrimidines, Chalcone, Acylation of resorcinol, Antibacterial, TPSA.