



Synthesis and Antimicrobial Activity of Novel Chalcone Analogues Bearing 2-Furan Trifluoromethyl Ring

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ABSTRACT

Synthetic fluorinated chalcones have been found to exhibit several pharmacological activities, including: antioxidant and anticancer activity, NO inhibition, tropomyosin-related kinase B (TrkB) brain imaging, antibacterial activity. The present paper describes the synthesis, characterization and antibacterial activity of novel chalcone derivatives 7a-7m prepared from commercially available key starting materials such as Ethyl 4,4,4-trifluoro acetoacetate and 3-methoxy-4-hydroxy acetophenone. All the compounds, 7a-7m were screened in-vitro (at a concentration: 10 µg/disc) for their antibacterial activity against two Gram-positive strains (Staphylococcus aureus and Bacillus subtilis) and two Gram-negative strains (Escherichia coli and Pseudomonas aeruginosa). Results of the antibacterial data revealed that among all the compounds tested, compound 7d to 7h showed excellent activity, while compounds 7c, 7i, 7j and 7k displayed good activity against all the tested bacteria.

Keywords: Antibacterial Activity, Synthesis, 3-methoxy-4-hydroxy acetophenone, ethyl 2,2,2-trifluoroacetate .
