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Synthesis, Antibacterial and Antifungal Activity of New Chalcone Analogues Derived From 2-Hydroxy-Acetonaphthone

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ABSTRACT

The wide variety of pharmacological activities associated with the chalcone derivatives includes antimalarial, anti-inflammatory, cytotoxic, anticancer, antituberculosis, antifungal, antileish-manicidal, and antioxidant properties. The present paper describes the synthesis of new chalcone derivatives ***4a-4h*** *from commercially available 2-Hydroxy-acetonaphthone as starting material. The synthesized compounds* ***4a–4h*** *were evaluated for antimicrobial and antifungal activity by disc diffusion method. The antimicrobial and antifungal activity was evaluated against, A. niger, C.albicans (fungal strains), E. coli and P. aeruginosa (Gram negative bacteria), S. aureus and S. pyogenes (Gram positive bacteria) using Nystatin (for fungi) and ciprofloxacin (for bacteria) as the standard drugs. In general it is observed that compounds* ***4d*** *(R = 3,4,5-tri-Methoxy),* ***4e*** *(R = 3-OMe-4-OEt),* ***4f*** *(R = 4-CF_3),* ***4g*** *(R = 4-OCF_3) and* ***4h*** *(R = 4-Cl) displayed good antibacterial and antifungal activity.*

Keywords: Antibacterial Activity, Antifungal Activity, Chalcone, 2-Hydroxy-Acetonapthone, Ciprofloxacin, Nystatin.