

Synthesis and Pharmacological Evaluation of Substituted Pyrimidine Derivative Containing Thiol Group

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Abstract : An efficient method has been described for the synthesis of 6-(substituted aryl)-4-(2'-hydroxy-5'-chlorophenyl)-1, 6-dihydropyrimidine-2-thiol, as a beneficial antibacterial and antifungal agents. The diketones of title compounds were synthesized in four steps and subsequently these diketones were further reacted with thiourea in the presence of DMF, which led to the formation of dihydropyrimidine derivatives 5 (a-f). Compounds 5 (a-f) were screened for their in vitro antibacterial and antifungal activity by agar well method. Compounds 5b, 5c, 5e, and 5f were exhibited significant antimicrobial potential against tested strains at 50ug/ml and 100ug/ml concentrations. Six novel dihydropyrimidine analogues have been synthesized, characterized and found to be promising antibacterial and antifungal agents.

Keywords : diketones, dihydropyrimidine, antimicrobial activity, thiol group

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