STRUCTURE ACTIVITY ANALYSIS OF ANTIBACTERIAL AND ANTIFUNGAL ACTIVITIES OF SOME SUBSTITUTED CHROMONES

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Abstract : Bacteria and fungi are causes of numerous diseases in plants as well as animals . How anti-bacterial and anti-fungal activities change in chromonyl chalcones as well as heterocycally substituted chromones with structural variation in compounds is described in present study. Both chromonyl chalcones as well as heterocycally substituted chromones derived from 3-formylchromones have been found to be good antimicrobials. It is found that electron rich aryl groups on chalcone backbone increase antibacterial activities; whereas, heteroaromatic substituent like 2-furyl group favour antifungal characteristics in chromonyl chalcones. Electron releasing alkyl group like methyl group at C_6-position of chromone moiety causes decrease in antimicrobial action; but, electron withdrawing – Cl substituent at the same position results in enhanced activity.

Keywords: Antibacterial activity, Antifungal activity, Chromonyl chalcones, Heterocycally substituted chromones , Filter paper disc method

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