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Synthesis and Antimicrobial activity of some Chrome-2-one derivatives

Synthesis, Characterization and Antimicrobial Screeningof some Chromen-2-one acetohydrazides

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The aim of the undertaken research work was to synthesise molecules, which could have capability of inhibiting growth of bacteria and fungi. Pechmann and Duisberg method was used to synthesise 7-hydroxy-4-methyl chromen-2-one. Ethyl 2-(4-methyl-2-oxo-2H-chromen-7-yloxy) acetate was synthesized by the reaction between ethylchloroacetate and 7-hydroxy-4-methyl chromen-2-one in presence of acetone and anhydrous K2CO3. 4-Methyl-2-oxo-2H-chromen-7-yloxy)-acetic acid hydrazide (3) was synthesized from Ethyl 2-(4-methyl-2-oxo-2H-chromen-7-yloxy) acetate and 85% NH2 NH2 .H2O in ethanol as a solvent. Compounds (4a-4l), were synthesised by reaction of compound (3) with various aldehydes and isatin in acetic acid-ethanol as solvents. The sharp melting points, TLC, HPTLC and IR & 1H NMRspectral analysis confirmed the purity and homogeneity of all the title compounds. The synthesised compounds were obtained in solid state in yield varying from 61 to 88 %. In case of antibacterial activity compound 4e was found to be the most active compound among the entire series against Staphylococcus aureus.In case of antifungal activity compound 4l was found to be the most active.

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