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Antibacterial Activity of Coumarin Derivatives Synthesized from Hydroxy-4-2H-[1]-Benzopyran-2-one. The Comparison with Standard Drug

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Abstract: In present paper, we report the organic syntheses of three compounds from 4-Hydroxy-2-H-[1]-benzopyran-2-one and describe the results of antibacterial activity of purified compounds. Compounds 4-Hydroxy-3-nitro-2H-[1]-benzopyran-2-one **(1a)**; 4-[N-Ethylhydrazino]-2H-[1]-benzopyran-2-one **(2a)**; 4-Butylamino-2H-[1]-benzopyran-2-one **(3a),** have been synthesized and characterized using melting points, IR spectra, ^{1}H-NMR and ^{13}C-NMR spectra. The antibacterial activity of synthesized compounds and streptomycin at concentrations of 1mg/ml; 3mg/ml and 5mg/ml have been evaluated against three strains of bacterial culture; *Staphylococcus aureus, Escherichia coli* and *Klebsiella.* The compounds show bacteriostatic and bactericidal activity.

Keywords: *4-Hydroxy-2 H-[1]-benzopyran-2-one, coumarin derivatives, antibacterial activity, Staphylococcus aureus, Escherichia coli, Klebsiella, streptomycin.*

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