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Synthesis, Characterization, and In Vitro Antibacterial Activities of Macromolecules Derived from Bis-Chalcone

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Abstract

We investigated the antibacterial activity of some new macromolecules such as bis-pyrazoline, bis-pyrazole, bis-pyrimidines prepared from the reaction of bis-chalcone with thiosemicarbazide/phenyl hydrazine/guanidine hydrochloride/thiourea. All the macromolecules have been characterized by IR, ¹H NMR, ¹³C NMR, mass and elemental analyses. The antibacterial activity of these compounds was first tested in vitro by the disc diffusion assay against two Gram-positive and two Gram-negative bacteria, and then the minimum inhibitory concentration was determined with the reference to standard drug chloramphenicol. The results showed that pyrazoline derivative showed better antibacterial activity on *S. typhimurium* and *E. coli* than the reference drug chloramphenicol.

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KeyWords Plus: [BIOLOGICAL EVALUATION](#); [DERIVATIVES](#); [ANALOGS](#)

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