

SYNTHESIS AND BIOLOGIC PROPERTIES OF SOME 1-(ALCHYL)PHENYL-3-(4-(3-(PYRIDIN-2-IL)ACRYLOYL)PHENYLTHIOUREA

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Abstract: This paper describe the synthesis of some 1-(alchyl)aryl-3-(4-(3-pyridin-2-il)acryloyl)phenylthiourea obtained by condensation of 2-pyridincarboxaldehyde with some derivatives of 4-acetylphenylthioureas in basic medium or by addition of aliphatic and aromatic amines to the corresponding isothiocyanatopropenones. 12 new compounds were obtained and their biological properties were analysed. The substituted thioureas by pyridine radicals, morpholine and phenol show a maximum bacteriostatic activity for Gram positive microorganisms like: *Staphylococcus Aureus* and *Enterococcus Faecalis* at the minimum inhibitory concentration 9.37-37.5 µM. Antifungal activity for *Candida Albicans*, *Aspergillus Niger*, *Aspergillus Fumigatus*, *Penicillium* is weak, in minimum inhibitory concentration 600- >600 µM. The leukemia activity like inhibitor (HL-60), is 84-96.9% at the concentration 10⁻⁵ mol/l and 15-20% and at the concentrations 10⁻⁶, 10⁻⁷ mol/l.

Keywords: chalcones, isothiocyanatopropenones, thioureas, antibacterial activity, antifungal activity, antiproliferative activity.