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Abstract

Synthesis And Antimicrobial Screening Of Novel Mannich Bases Of Isatin Derivative

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A new series of N-Mannich bases (la-lh) of 3-semicarbazino isatin (I) was synthesized by reacting (I) with formaldehyde and various aromatic primary amines. The chemical structures were confirmed by means of IR, 1H NMR and elemental analysis. The compound; synthesized were screened for antimicrobial activity against Staphylococcus aureus, Escherichia coli and Candida albicans by cup plate method. All the compounds showed remarkable antimicrobial activity except compound If that showed moderate activity against S. aureus.

A Mannich reaction of isatin with monosubstituted piperazines in the presence of aqueous formaldehyde was used to synthesize new, as well as two previously described derivatives of 1-piperazinomethylisatins, which were further converted to isoindigo derivatives. The antimicrobial activity of the obtained heterocycles was evaluated. Keywords. isatin piperazines aminomethylation antimicrobial activity Mannich reaction. Translated from Khimiya Geterotsiklicheskikh Soedinenii, 2016, 52 (1), 25–30. Electronic supplementary material. The online version of this article (doi: 10.1007/s10593-016-1826-6 Objective: Synthesis and analgesic, anti-inflammatory and antimicrobial evaluation of some novel Schiff and Mannich bases of isatin derivatives. Methods: A series of novel 3-(4-(2-(substituted benzylideneamino)thiazol-4-yl)phenylimino)-1-((dimethylamino)methyl)-5-fluoroindolin-2-one Schiff and Mannich base derivatives were synthesized by using various aromatic aldehydes with isatin derivatives. The chemical structures of all synthesized compounds were confirmed by IR, 1H-NMR, Mass spectra and elemental analysis. Chiyanzu E, Hansell P, Gut J. Synthesis and evaluation of isatins and thiosemicarbazone derivatives against cruzain, falcipain-2 and rhodesain. Bioorg Med Chem Lett 2003;13:3527.