



ChemTech

International Journal of ChemTech Research

CODEN (USA): IJCRGG, ISSN: 0974-4290, ISSN(Online):2455-9555
Vol.10 No.6, pp 441-445, 2017

Synthesis, Characterization and Biological Evaluation of some 2, 3-dihydroquinazolinone coupled 5, 5-disubstituted imidazolidine-2,4-diones

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Abstract: The aim of the present work is to synthesize and find out the biological importance of the series of the designed 2, 3-dihydroquinazolinone coupled 5, 5-disubstituted imidazolidine-2,4-diones compounds. 4-(4-oxoquinazolin-3(4H)-yl)benzene-1-sulfonyl chloride is obtained by the reaction between 4-aminobenzene-1-sulfonyl chloride and 4H-benzo[d][1,3]oxazin-4-one. This compound was then condensed with 5, 5-disubstituted imidazolidine-2, 4-diones compounds. And four novel compounds were prepared in moderate yields. The structures of all four derivatives have been characterized on the basis of physical properties of the molecule and satisfactory spectral (IR, ¹H NMR) data. These compounds were evaluated for their antimicrobial activity against Gram (+) and Gram (-) bacteria as well as fungal organism. is evaluated. The compounds showed lower to moderate level of drug like properties.

Keywords : Imidazolidinone, oxoquinazolin, hydantoin, antimicrobial activity.

Bhadreshkumar R Sudani *et al* /International Journal of ChemTech Research, 2017,10(6): 441-445.
