

عنوان مقاله:

Synthesis, pharmacological evaluation and structure-activity relationship study of hydrazones

محل انتشار:

نشریه آسیایی شیمی سبز، دوره 4، شماره 4 (سال: 1399)

تعداد صفحات اصل مقاله: 18

نویسندگان:

Keyur M. Pandya - *Department of Chemistry, Arts, Science, and Commerce College, Veer Narmad South Gujarat University, Surat, Gujarat, India*

Bhavesh P. Dave - *Department of Chemistry, M.B. Patel Science College, Sardar Patel University, Anand, Gujarat, India*

Arpan H. Patel - *Department of Clinical Development, Immunocore LLC, 181 Washington Street, Conshohocken, Pennsylvania-19381, USA*

Rajesh J. Patel - *Department of Organic Chemistry, Shri A.N. Patel P.G. Institute of Science and Research, Anand, Gujarat, India*

Jignesh T. Patel - *Department of Pathology and Laboratory Medicine, Northshore University Healthsystem, Evanston, Illinois-60201, USA*

Piyush S. Desai - *Department of Chemistry, Arts, Science, and Commerce College, Veer Narmad South Gujarat University, Surat, Gujarat, India*

خلاصه مقاله:

The development of novel compounds, hydrazones have shown that they possess a wide variety of biological activities. Hydrazones/azomethines/imines possess $-NHN=CH-$ and constitute an important class of compounds for new drug development. We have undertaken a library synthesis of (1H-benzo[d][1,2,3]triazole-5-yl)(phenyl) methanone clubbed 1,3,4-oxadiazole derivatives bearing substituted hydrazone moiety were synthesized. We have synthesized a collection of 14 compounds and characterized by elemental analysis, MS, 1H NMR, and ^{13}C NMR spectral data and were screened, against the anticancer and antituberculosis activity. Where the majority of these compounds showed good anticancer and antitubercular activities against the tested strains of M. tuberculosis H37Rv and lung NCI H-522, ovary PA-1, liver Hep G2 compared with the reference drugs. Compounds 5d, 5e, 5g, and 5n showed excellent potency against M. tuberculosis H37Rv strain compares to standard drugs whereas, against lung NCI H-522 cancer cell lines compounds 5e, against ovary PA-1 cancer cell line compound 5i, and against liver Hep G2 cell line compound 5n showed excellent activity compared to standard drug thus, these studies suggest that (1H-benzo[d][1,2,3]triazol-5-yl)(phenyl)methanone clubbed 1,3,4-oxadiazole derivatives bearing hydrazone moiety are interesting scaffolds for the development of novel antitubercular and anticancer agents.

کلمات کلیدی:

Benzotriazole 1, 3, 4-oxadiazole Hydrazone Antitubercular Anticancer

