Synthesis and Antiproliferative Activity of 5-Phenyl-N3-(4fluorophenyl)-4H-1,2,4-triazole-3,4-diamine Derivatives

Authors : L. Mallesha, P. Mallu, B. Veeresh

Abstract : In the present study, 2, 6-diflurobenzohydrazide and 4-fluorophenylisothiocyanate were used as the starting materials to synthesize 5-phenyl-N3-(4-fluorophenyl)-4H-1, 2, 4-triazole-3, 4-diamine. Further, compound 5-phenyl-N3-(4-fluorophenyl)-4H-1, 2, 4-triazole-3, 4-diamine reacted with fluoro substituted benzaldehydes to yield a series of Schiff bases. All the final compounds were characterized using IR, 1H NMR, 13C NMR, MS and elemental analyses. New compounds were evaluated for their antiproliferative effect using the MTT assay method against four human cancer cell lines (K562, COLO-205, MDA-MB231, and IMR-32) for the time period of 24 h. Among the series, few compounds showed good activity on all cell lines, whereas the other compounds in the series exhibited moderate activity.

1

Keywords : Schiff bases, MTT assay, antiproliferative activity, human cancer cell lines, 1, 2, 4-triazoles

Conference Title : ICSRD 2020 : International Conference on Scientific Research and Development

Conference Location : Chicago, United States

Conference Dates : December 12-13, 2020