

11th Global Experts Meeting on

CHEMISTRY AND COMPUTATIONAL CATALYSIS

May 18-19, 2018 Singapore

Synthesis and biological evaluation of new 1,3,4-oxadiazole derivatives as anticancer agent**Ishan Pachal and Ashish Patel**
Parul University, India

Objective: The present work deals with the design, synthesis, characterization of novel substituted 2-(4-phenylamino)-N-(5-((4-nitrophenoxy)methyl)-1,3,4-oxadiazol-2-yl) acetamide and substituted N-(5-(phenoxy)methyl)-1,3,4-oxadiazol-2-yl)-2-(phenylamino) acetamide derivatives in treatment of lung cancer.

Methods: Novel 1,3,4-oxadiazole derivatives were synthesized and characterized by melting point, TLC, IR Spectroscopy, Mass spectroscopy and ¹H NMR. In vitro biological evaluation was performed on NCI-H2066 cell line for different concentrations 10-1000 μM by telomeric repeat amplification protocol (TRAP) assay.

Results: Novel substituted 2-(4-phenylamino)-N-(5-((4-nitrophenoxy)methyl)-1,3,4-oxadiazol-2-yl) acetamide and substituted N-(5-(phenoxy)methyl)-1,3,4-oxadiazol-2-yl)-2-(phenylamino)acetamide were synthesized and characterized using spectral and analytical data. All compounds have shown considerable percentage inhibition of cell growth with respect to Bevacizumab, but compound which is nitro substituted and chloro substituted is equipotent with respect to activity as compared to standard Bevacizumab.

Conclusion: Among all synthesized derivative, *p*-nitro substituted derivative and *p*-chloro substituted showed highest activity against human cancer cell line NCI-H2066 by telomeric repeat amplification protocol assay.

Biography

Ishan Panchal has obtained his PhD from Gujarat Technological University, India. He is as an Assistant Professor at the Department of Pharmaceutical Chemistry in Parul Institute of Pharmacy, Parul University, India. He has published more than 19 papers in reputed journals and has published two monographs.

ishanpharma@gmail.com

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