ANTI-CANCER ACTIVITY ON Hep-G2 OF NEW TETRAHYDROQUINOLINE-ISOXAZOLINE MOLECULAR HYBRIDS

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The human hepatocellular carcinoma (HCC) is the sixth most common cancer worldwide. It is the third leading cause of cancer death and the major cause among patients with cirrhosis. In the search for new compounds with anticancer activity we evaluated 1-(1-((3-phenyl-4,5-dihydroisoxazol-5-yl)methyl)-1,2,3,4-Tetrahydroquinolin-4-yl)pyrrolidin-2-one molecular hybrid and its derivatives on human hepatocarcinoma cells Hep-G2. To achieve this objective the cells were grown in EMEM medium supplemented with 10% FBS and pH 7.4, and cell viability was assessed by the MTT method. Cells were treated with various concentrations (5, 25, 50 and 100μM) of new molecular hybrids. 16 compounds were evaluated, cytotoxic concentrations (CC) lower than 100μM were observed in 4 compounds, as is the case of hybrids 1-(6-methyl-1-((3-phenyl-4,5-dihydroisoxazol-5-yl)methyl)-1,2,3,4-tetrahydroquinolin-4-yl)pyrrolidin-2-one, 1-(6-chloro-1-((3-phenyl-4,5-dihydroisoxazol-5-yl)methyl)-1,2,3,4-tetrahydroquinolin-4-yl)pyrrolidin-2-one, 1-(1-((3-(4-methoxyphenyl)-4,5-dihydroisoxazol-5-yl)methyl)-1,2,3,4-tetrahydroquinolin-4-yl)pyrrolidin-2-one and 1-(6-chloro-1-((3-(4-methoxyphenyl)-4,5-dihydroisoxazol-5-yl)methyl)-1,2,3,4-tetrahydroquinolin-4-yl)pyrrolidin-2-one, with CC\textsubscript{50} of 68.4, 68.8, 53.2 and 32.3 μM, respectively. This results allows us to demonstrate a cytotoxic effect of these molecules on the cell line Hep-G2 at low concentrations, suggesting that the molecular hybrids tetrahydroquinoline-isoxazoline are a promising drug for the treatment of this tumor due to its cytotoxic effect.

**Keywords:** hepatocellular carcinoma, cancer, Molecular Hybrids

**Acknowledgement:** This work was supported by the “Universidad Industrial de Santander”, Colombia