Heterocyclic Arylidene Chemical Compounds vs. Glioblastoma

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Glioblastoma multiforme (GBM) is a very deadly form of brain cancer. The effects of hybrid compounds of heterocyclic rhodanine and arylidene (boronic acid) were tested on GBM cancer cells. The cells were grown in 96 well culture plates and treated with four different concentrations. Since both drugs had anti-cancer properties, the hybrid had a high probability of killing a large amount of cells. The goal was to kill as many cells as possible with the lowest concentration possible. The compound of rhodanine-4-formyl-phenyl boronic acid (J MCL 1) showed a large decrease in cell count, while rhodanine-paraformaldehyde (J MCL 4) showed significant decrease with the 2.0 mg/mL concentration. The results proved that the highest concentration was most effective. It was concluded that bonds in para-position on the benzene ring cause a significant effect on cell count.

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