Investigating the Culturing Environment of Glioblastoma multfirome

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Cell locomotion and cell aggregation are part of the large blank areas in our biological knowledge today. Many scientists focus on targeting cancer with different compounds. However, Glioblastoma cells are heterogenous, which makes targeting incredibly difficult. The focus has been drawn toward killing cells and away from understanding migration, which is how Glioblastoma kills a patient. The presence of Glioblastome Multiforme causes many functional changes in the brain. Functional changes cause temperature changes, which in turn create a temperature gradient. In different regions of the brain, tasks are accompanied by temperature decreases. Functionally induced changes have caused temperature to range from .04 °C-.08 °C to .7 °C. Thermotaxis, or the migratory preference towards a certain temperature has been heavily studied on human sperm cells. Researchers have found that organisms tend to only respond to temperature changes if it is useful. Does GBM have a preference to a certain temperature? Is Glioblastoma Multiforme thermotaxic? A temperature gradient was induced and tested for a 12 hour span on 3D cultured flasks. Time-lapse photography was compiled into a Quick-Time movie to analyze the effect of the temperature gradient on the GBM cells.

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