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Abstract**Full text links**Neuropharmacology. 2004 Sep;47(3):315-23.**Hypothesis: cannabinoid therapy for the treatment of gliomas?**Velasco G¹, Galve-Roperh I, Sánchez C, Blázquez C, Guzmán M.**Author information****Abstract**

Gliomas, in particular glioblastoma multiforme or grade IV astrocytoma, are the most frequent class of malignant primary brain tumours and one of the most aggressive forms of cancer. Current therapeutic strategies for the treatment of glioblastoma multiforme are usually ineffective or just palliative. During the last few years, several studies have shown that cannabinoids—the active components of the plant *Cannabis sativa* and their derivatives—slow the growth of different types of tumours, including gliomas, in laboratory animals. Cannabinoids induce apoptosis of glioma cells in culture via sustained ceramide accumulation, extracellular signal-regulated kinase activation and Akt inhibition. In addition, cannabinoid treatment inhibits angiogenesis of gliomas in vivo. Remarkably, cannabinoids kill glioma cells selectively and can protect non-transformed glial cells from death. These and other findings reviewed here might set the basis for a potential use of cannabinoids in the management of gliomas.

PMID: 15275820 [PubMed - indexed for MEDLINE]

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