Researchers at the University of South Florida have discovered that delta-9 tetrahydrocannabinol (THC) inhibits the production of infectious oncogenic gamma herpes viruses.

THC is a naturally-occurring psychoactive compound of marijuana that has been shown to modulate immune responses and function of lymphocytes. After primary infection, gamma herpes viruses persist in lymphoid cells in a latent circular form. An external stimulus can reactivate a gamma herpes virus that will then produce infectious viral progeny.

Our scientists have evaluated THC and found it to be a potential inhibitor of gamma herpes virus replication. THC prevented sudden reactivation of gamma herpes viruses in infected cells without cytotoxic effects on normal kidney cells. Furthermore, gamma herpes virus-infected cells died upon reactivation of the virus but survived when cultured with the cannabinoid compound, THC. The researchers showed that THC is selective for gamma herpes viruses with no effect on related viruses. Our scientists concluded that THC targets ORF50, a gene shared by gamma herpes viruses.


**ADVANTAGES:**

- Selective for gamma herpes viruses
- Very potent
- No cytotoxic effects on kidney cells

**THC is More Potent than Existing Herpes Antiviral Drugs**

**Figure: THC inhibits murine gamma herpesvirus replication**

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