Exploring the Role of Cannabidiol in a Caenorhabditis elegans Epilepsy Model

Edelman, Hailey (School: Syosset High School)

The role of cannabidiol in a Caenorhabditis elegans epilepsy model was analyzed using adenosine and tumor necrosis factor alpha antagonists to further elucidate the protective effects of cannabidiol in mitigating seizure activity. Convulsive-sensitive mutant unc-49 C. elegans were cultured in NGM agar with OP50 E. coli with tumor necrosis factor alpha antagonist etanercept and the adenosine antagonist ZM241385 to diminish the antiepileptic effects of cannabidiol and increase epileptiform activity in unc-49 C. elegans. C. elegans convulsions were induced with pentylenetetrazole and recorded utilizing a dissecting microscope. Furthermore, the addition of adenosine agonist methotrexate restores the protective effects of cannabidiol.

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