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(54) Title: CANNABIS PLANT DERIVED EXTRACELLULAR VESICLES AND THERAPEUTIC METHODS USING THE SAME

(57) Abstract: Disclosed is a method and composition for using plant extracellular vesicles (EVs) as vectors for delivering therapeutic molecules to the CNS. We demonstrated that plant EVs are more efficient vectors than delivery with other methods. These vectors can be used to treat diseases in the CNS, such as cancer, injuries like TBI, degeneration such as Alzheimer's and aging and cognitive disorders such as PTSD, depression and anxiety. New data using hemp derived EVs to treat cancers in the brain and to impact precursor cells in the brain and isolation of EVs are included. In addition, disclosed is an improvement on the efficacy of intra-nasal delivery and oral delivery when using EVs.



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