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(54) Title: ADENO-ASSOCIATED VIRAL VECTORS FOR TARGETING DEEP BRAIN STRUCTURES

(57) Abstract: Provided herein are targeting peptides and vectors containing a sequence that encodes the targeting peptides that deliver agents to specific substructures in the brain. Specifically, the targeting peptide is a component of a modified, sequence-specified adeno-associated virus (AAV) capsid protein further wherein the brain substructure may be the globus pallidus, putamen, internal capsule, caudate, claustrum, substantia nigra, motor cortex, insula, temporal cortex, thalamus, hippocampus, subiculum, and deep cerebellar nuclei.



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