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## **Gene Transfer into the Central Nervous System by Recombinant Adenovirus Vector**

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The transfer of transgenes into the central nervous system (CNS) can be a valuable tool to investigate the functions of cells within the CNS and to treat neurodegenerative disease. Recombinant adenovirus vectors (rAV) can efficiently transduce nondividing cells and provide for the delivery of their gene products to specific regions of brain. Here, we investigate whether stable gene transduction can be achieved in cells of the CNS by targeted delivery of an adenovirus (AV) encoding an enhanced green fluorescent protein (EGFP) as a reporter gene. The viral vector was injected directly into the striatum, hippocampus, thalamus and dentate gyrus in adult mouse brain. Expression of EGFP was detected as early as 4 days after stereotaxic injection and, sustained for over 1 month. Confocal microscopy and double immunofluorescence detection were used to assess the cell types expressing EGFP in adult mouse brain. The present study show that the CNS cells transduced by our adenovirus vector are not neural cells.

**Keyword** : Adenovirus, CNS, EGFP