عنوان مقاله:
Viral gene therapy in Parkinson’s disease

محل انتشار:
دومین کنگره بین المللی و دهمین همایش ملی نوروژنتیک ایران (سال: 1396)

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خلاصه مقاله:
Parkinson’s disease (DD) is a common disorder characterized by motor impairment including tremor, musclerigidity and postural instability. Current pharmacological interventions are palliative and largely aimed atincreasing dopamine levels through increased production and/ or inhibition of metabolism of this importantneurotransmitter. Current researches focus on gene therapy in this disease. One advantage of this method overconventional therapies, such as peripheral delivery of dopamine pre-cursor L-DOPA, is site-specific expressionof proteins with regenerative, disease modifying and potentially neuroprotective capacity. Sort of clinical trialshave been examined the capacity of glial-cell line derived neurotrophic factor and neurturin to rescuedegenerating dopaminergic neurons in the substantia nigra and their exon terminals in the striatum by of factorseither as purified protein or by means of viral vector mediated gene delivery to the brain.When we talk abouttypical virus vector, we indicate Adeno-associate virus (AAV), retroviruses and adenoviruses. AAV is the mostutilized vector in brain. The recombinant Adeno-associate virus(rAAV) remains the essence of the wild-typeAAV. AAV mainly transduces nervous system cells. The AAV will not integrated to host division.Theretroviruses include Lentivirus and non-lentivirus. They can integrate to host cells, thus It’ll not be dilute duringhost-cell division. In comparison to AAV the retrovirus can carry more gene fragment about 9kb.Recombinantadenovirus(rAd) had reduced the cytotoxicity and immunogenicity to an acceptable extend. It can carry about35kb of genetic material. The rAd still have certain immunogenicity although this will not impact the .transgeneexpression. Furthermore, the production of rAd is time consuming

کلمات کلیدی:
Gene therapy, Dopamine, Virus