Innovative new strategy to treat Parkinson's disease

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Stabilizing the cell's power-generating center protects against Parkinson's disease (PD) in a rat model, according to a report published online this week in the *Journal of Experimental Medicine*.

Mitochondria -- the energy production center of cells -- are damaged in PD, leading to loss of dopaminergic neurons and degeneration of brain function. Taking advantage of the fact that viruses often stabilize mitochondria in order to ensure survival of the cells they infect, a team led by John Sinclair and Roger Barker at the University of Cambridge injected a viral protein called beta2.7, known to protect mitochondria, into rats with a PD-like disease.

Rats injected with this beta2.7 before or after the formation of PD-like brain lesions performed better on tests of behavior and motor function. Their brains also contained more dopaminergic neurons. Further work is needed to determine if the same approach will also benefit human PD patients.

More information: Kuan, W.-L., et al. 2011. *J. Exp. Med.* doi:10.1084/jem.20111126

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