

NonHuman Primate Research: Patient Advocacy Perspective

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US Patent/Other: None

NHP & Neurologic Disease: Critical Model Systems

**Animal models with behaviors
similar to dystonia in humans**



Current Problem

**Cell based, lower animals,
rodents and computer models
do not have dystonia**

Good for biochemical studies

Parkinson Disease

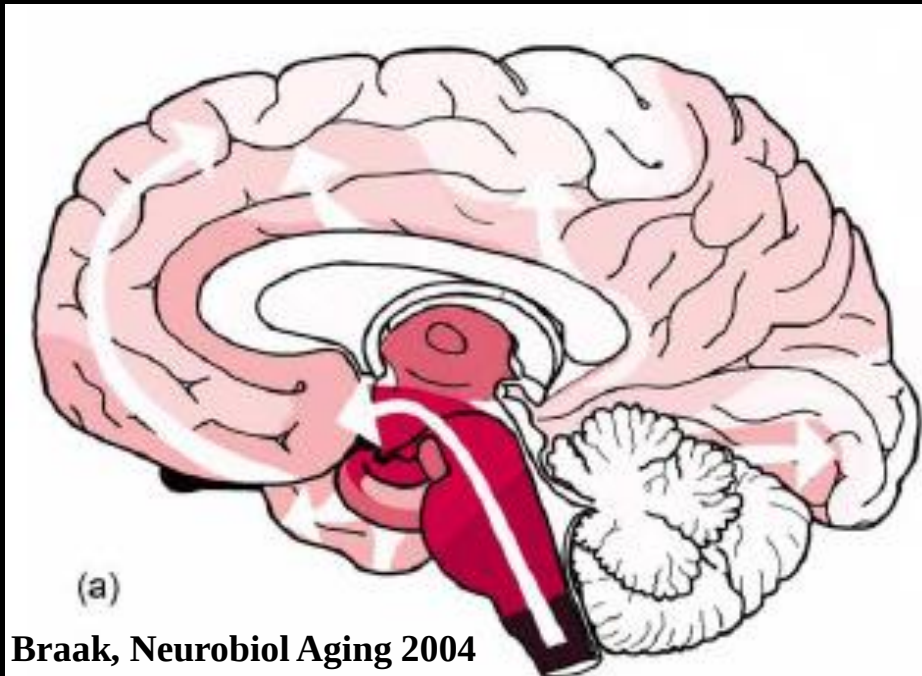
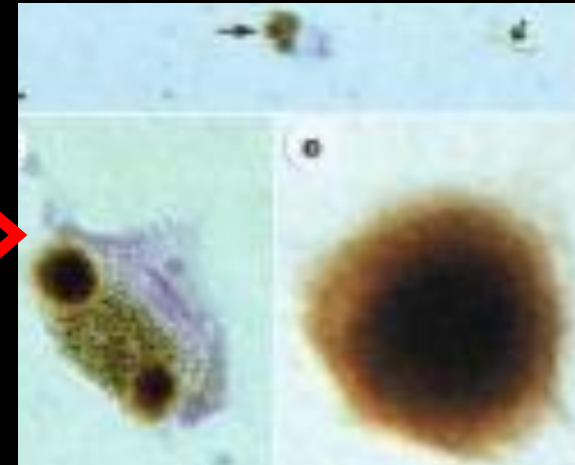
Lewy body



Normal

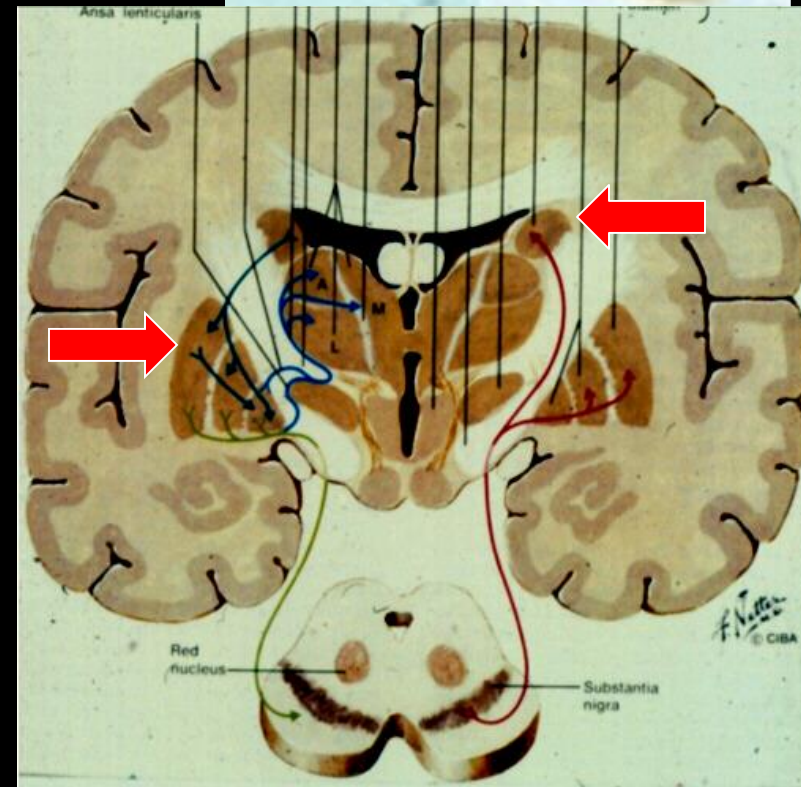


PD

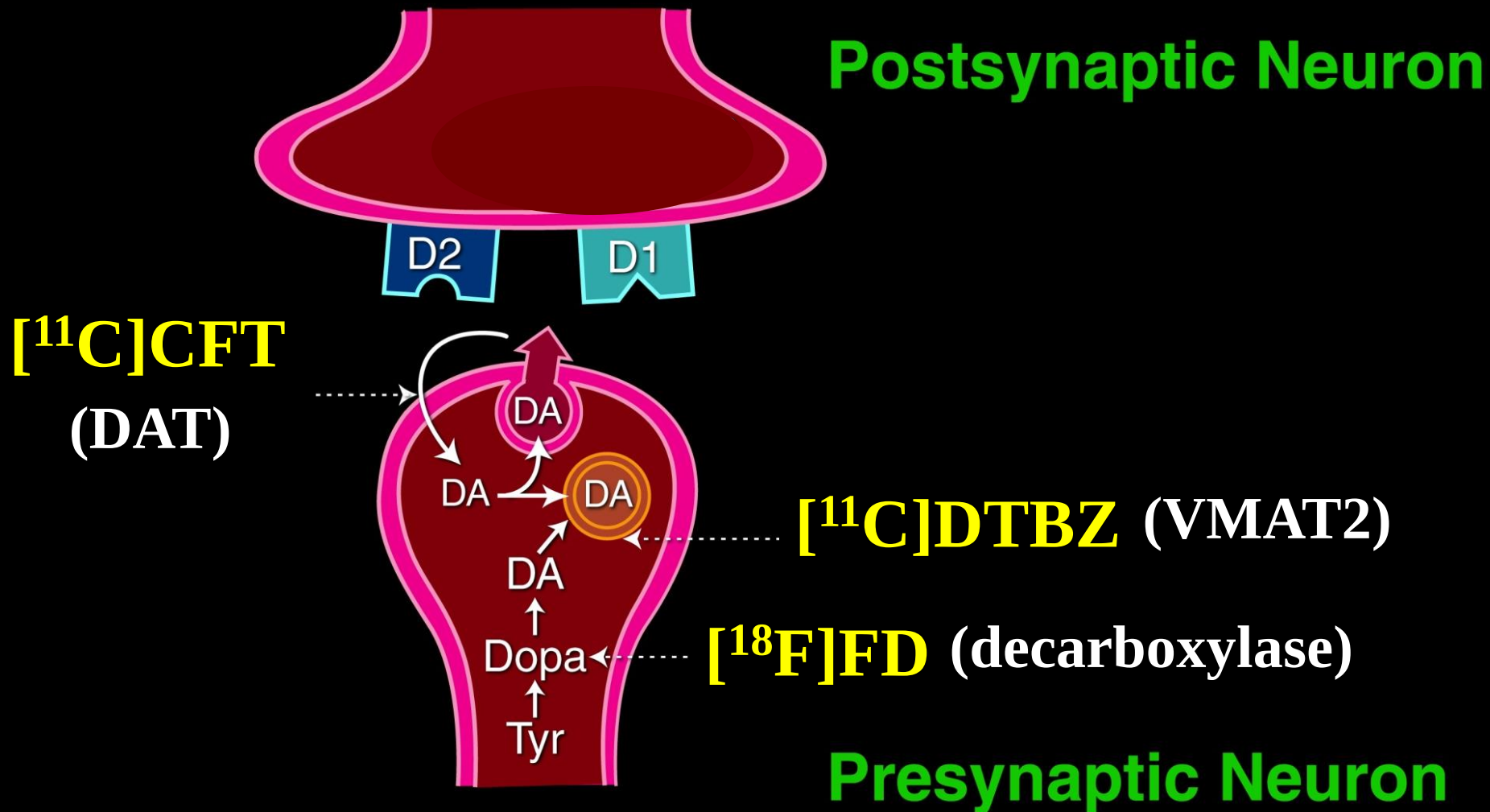


(a)

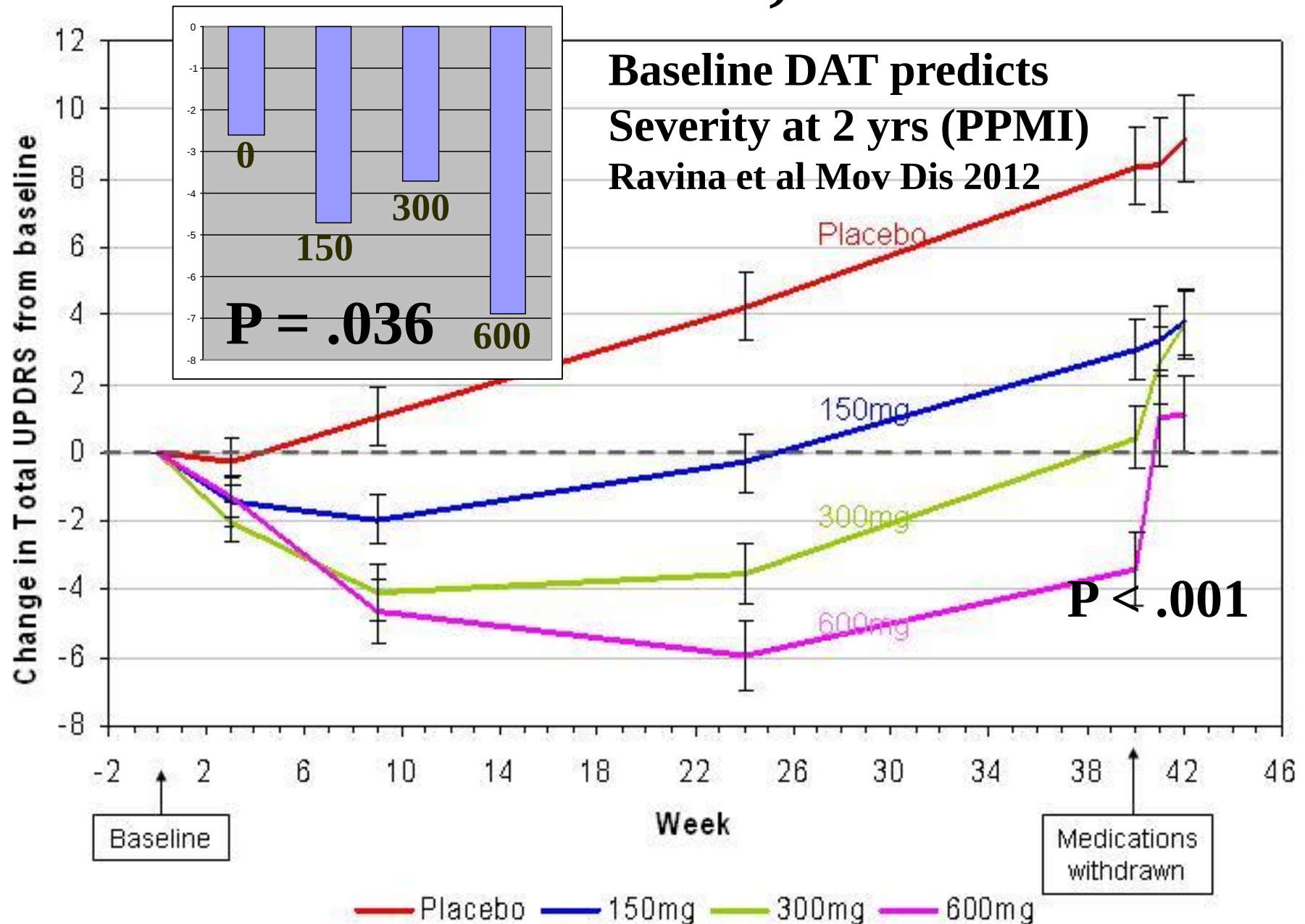
Braak, Neurobiol Aging 2004



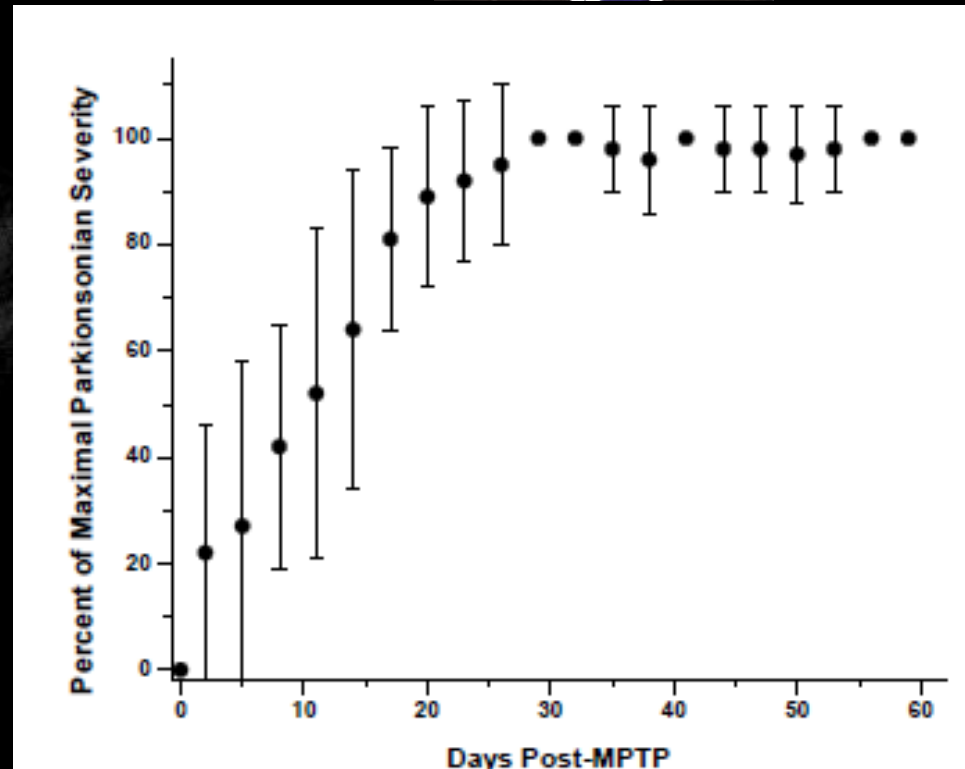
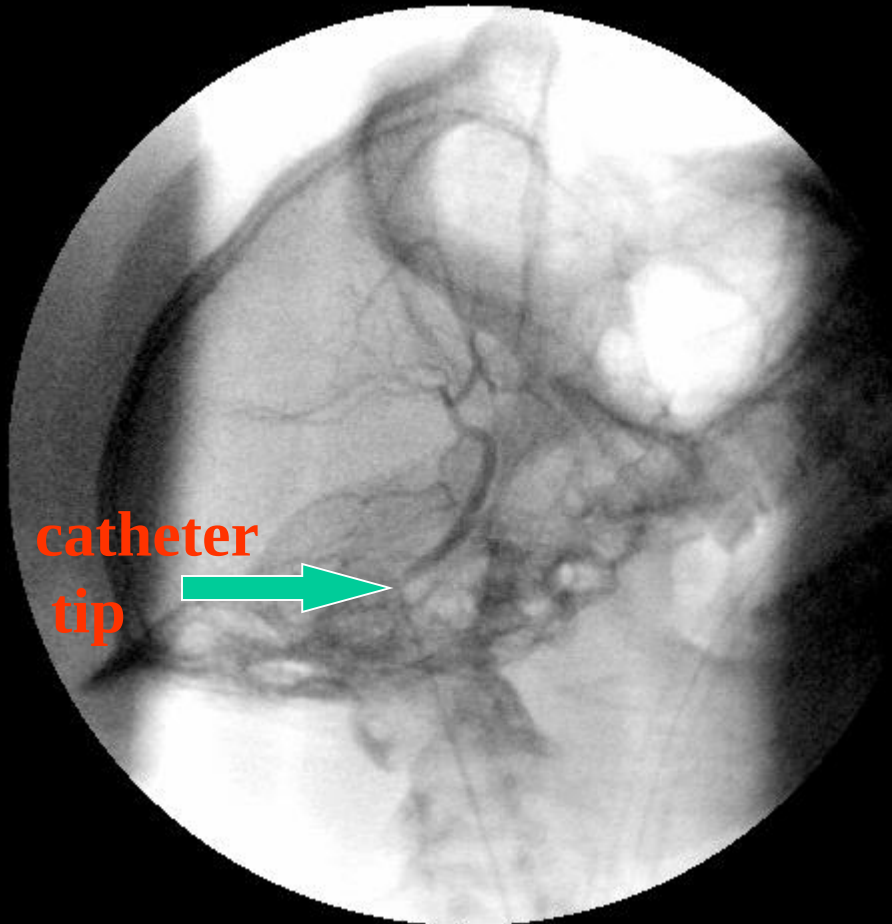
The Dopaminergic Synapse



ELLDOPA: PSG, NEJM 2004

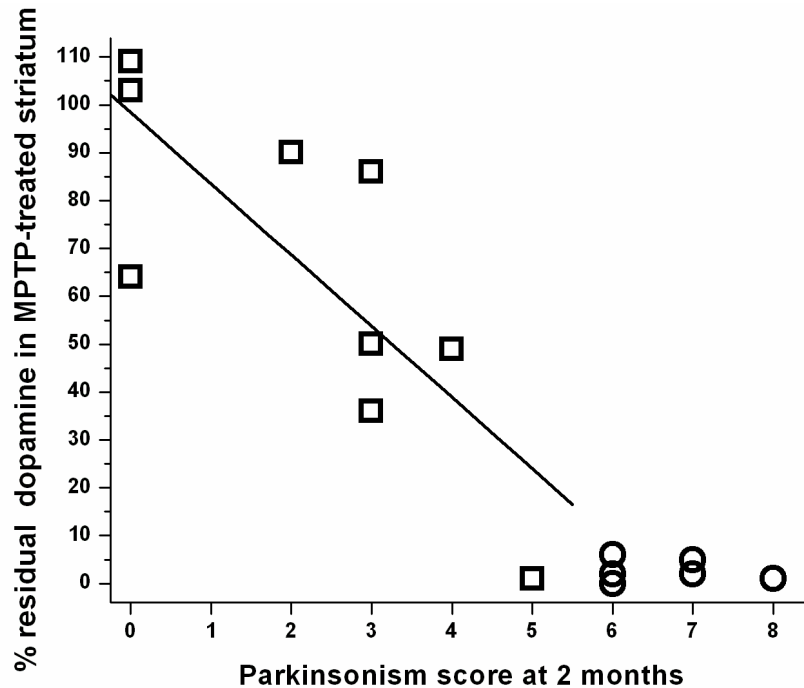


Unilateral ic MPTP

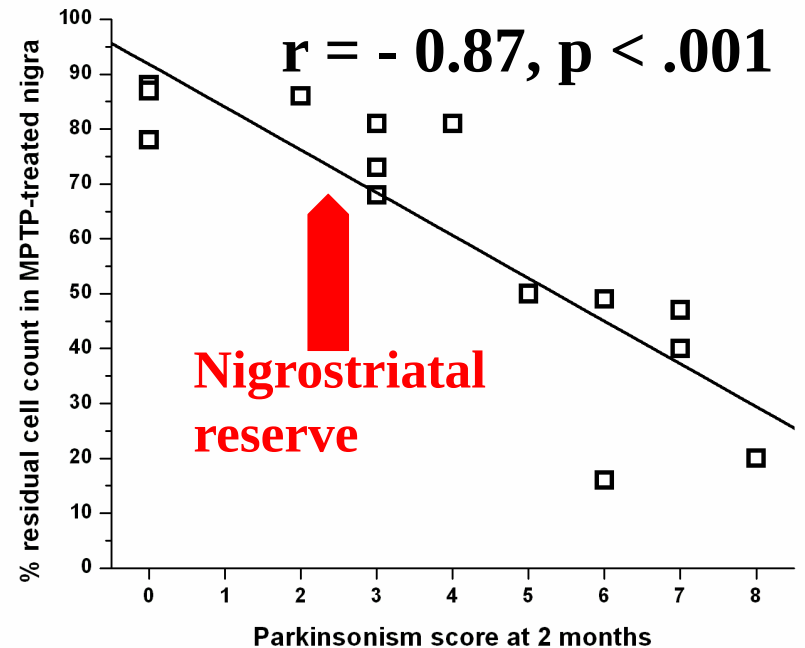


Todd R et al, 1996; Perlmutter JS et al, 1997
Tabbal S et al, 2006; Tabbal S et al, 2012

Parkinsonism vs striatal DA, SNpc



Ratings vs Dopamine



Ratings vs SNpc Cells



Tabbal S et al, Exp Neurol 2012

Current Needs

NHP model with obvious dystonia

For:

biomarker development/validation

DREADDS (Designer Receptor Exclusively
Activated by Designer Drugs)

therapeutic target identification

metrics of therapeutic efficacy

NHP Critical

Pathophysiology

vs

Behavior