

# Getting down to the heart of the (gray) matter to treat Parkinson's disease

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An agent under consideration for use in PET imaging combats neuronal death to relieve Parkinsonian symptoms in animal models, according to a study published on April 2nd in the *Journal of Experimental Medicine*.

The movement-related symptoms of Parkinson's disease, including muscle rigidity and tremors, are caused by the loss of dopamine-secreting neurons in the brain. Current therapies aim at increasing and maintaining dopamine levels to correct these motor impairments. However, these approaches do not address the underlying neuronal death that initiated the disease.

David Finkelstein, Kevin Barnham, and colleagues at the University of Melbourne find that the PET imaging agent CuII(atm) reverses the neurotoxicity that destroys dopamine-secreting neurons. Improvements in motor skills and memory were observed after treatment in four unique animal models of Parkinson's disease. The authors suggest this compound functions as a scavenger of peroxynitrite, whose accumulation is known to promote [neuronal death](#).

These results point to a potential strategy to restore motor and cognitive function in Parkinson's disease patients by reviving [neuronal function](#) rather than solely masking symptoms.

**More information:** Hung, L.W., et al. 2012. *J. Exp. Med.*  
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