

Moving toward improved cell replacement therapy for Parkinson's disease

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Parkinson's disease, which affects millions worldwide, results from neuron loss. Transplantation of fetal tissue to restore this loss has shown promise, but ethical concerns over acquiring this tissue limit its use.

In a June 17 study in the *Journal of Clinical Investigation*, Vania Broccoli and others at the San Raffaele Scientific Institute converted fibroblasts into neurons and engrafted them into the brains of rodents with parkinsonism.

The cells improved motor function, but not as well as transplanted rat fetal tissues. The authors then used a technology that allows the neurons to express engineered proteins, which respond to a specific drug to regulate neuronal activity. These neurons restored [motor function](#) almost as well as rat [fetal tissue](#).

An accompanying article discusses how this study potentially provides a promising source of replacement neurons in Parkinson's disease.

More information: Remote control of induced dopaminergic neurons in parkinsonian rats, *Journal of Clinical Investigation*, [DOI: 10.1172/JCI74664](https://doi.org/10.1172/JCI74664)

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