

# Antioxidant shows promise in Parkinson's disease

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Diapocynin, a synthetic molecule derived from a naturally occurring compound (apocynin), has been found to protect neurobehavioral function in mice with Parkinson's Disease symptoms by preventing deficits in motor coordination.

The findings are published in the May 28, 2013 edition of [Neuroscience Letters](#).

Brian Dranka, Ph.D., postdoctoral fellow at the Medical College of Wisconsin (MCW), is the first author of the paper. Balaraman Kalyanaraman, Ph.D., Harry R. & Angeline E. Quadracci Professor in Parkinson's Research, chairman and professor of biophysics, and director of the MCW Free Radical Research Center, is the corresponding author.

In a specific type of transgenic mouse called LRRK2R1441G, the animals lose coordinated movements and develop Parkinson's-type symptoms by ten months of age. In this study, the researchers treated those mice with diapocynin starting at 12 weeks. That treatment prevented the expected deficits in [motor coordination](#).

"These early findings are encouraging, but in this model, we still do not know how this molecule exerts neuroprotective action. Further studies are necessary to discover the exact mode of action of the diapocynin and other molecules with a similar structure," said Dr. Kalyanaraman.

Clinicians have expressed a need for earlier disease detection in Parkinson's Disease patients; the researchers believe further study of this specific mouse model may allow them to identify new biomarkers that would enable early disease detection, and ultimately allow for better patient care and quality of life.

Provided by Medical College of Wisconsin

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