

Support the Pedaling for Parkinson's Research Grant

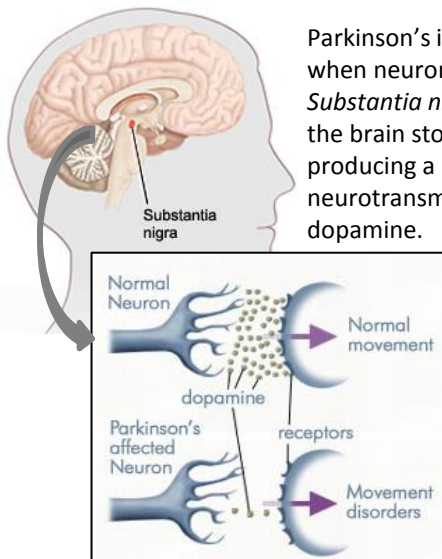
Your donation dollars: Supports research that investigates improving brain areas affected by Parkinson's



SUPPORT A RESEARCH GRANT THAT TARGETS IMPROVING THE HEALTH OF BRAIN AREAS INVOLVED WITH PARKINSON'S.

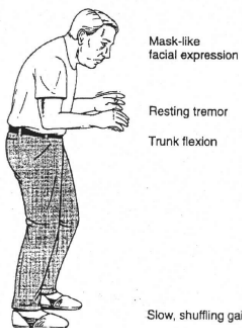
Background of Parkinson's

Parkinson's is caused when neurons in the *Substantia nigra* of the brain stop producing a neurotransmitter, dopamine.



Dyskinesia, in Parkinson's Patients

Dyskinesia refers to uncontrollable involuntary movements that develop in patients with advancing Parkinson's disease, causing twisting or jerking movements of the neck, trunk, upper or lower extremities. Dyskinesia can also affect the face, eyes and respiratory muscles.



Dr. Camila Henriques de Aquino, one of the recipients of the 2014 **Pedaling for Parkinson's Research Grant**, from the University of Toronto, is developing new protocols for measuring the efficacy of anti-dyskinesia medication using intravenous levodopa.

What is levodopa?

- Levodopa is one of the main drugs used to treat Parkinson's symptoms. It can be used at all stages of the condition as it replaces the dopamine that is lost in Parkinson's.

What is levodopa-induced dyskinesia?

- Levodopa-induced dyskinesia (LID) is a form of dyskinesia associated with levodopa used to treat Parkinson's disease and remains a problem in people with advanced Parkinson's, that often have chronic treatment of levodopa.

What is the problem?

- The understanding of what causes Levodopa-induced dyskinesia is evolving but it has historically been difficult to measure the severity of LID because of the distinct presentation and degree of awareness in each patient.
- It has been challenging to expand pre-clinical trials (animals) to clinical trials (humans).
- To date, there is a lack of knowledge about individual and relative performance of the available dyskinesia rating scales.

What is the purpose of Dr. Aquino's research?

- Using an intravenous levodopa model, this research aims to evaluate the clinimetric properties of currently used dyskinesia rating scales (e.g., Rush, AIMS, UDysRS, and CAPSIT) and determine which scale offers the best sensitivity and specificity. "Clinimetrics" is the practice of assessing or describing symptoms, signs, and findings by means of scales, indices, and other quantitative instruments.
- In addition, the research aims to evaluate the efficacy of new drugs to treat LID, by administering the anti-dyskinesia drugs before the infusion of levodopa intravenously.

What are the results of the research?

- Preliminary data in 9 patients suggested that the UDysR showed superior clinimetric properties.
- The intravenous levodopa model has demonstrated to be a safe and reliable method of evaluating anti-parkinsonian effect of levodopa and severity of dyskinesia.
- The intravenous levodopa model is useful in clinical trials to test the efficacy of anti-dyskinesia drugs.

What does this research mean for people with Parkinson's?

- Our results may help further clinical trials design on new drugs to treat dyskinesia in patients with Parkinson's.

Your fundraising dollars help fund the research that is working towards finding a cure and new treatments for Parkinson's. Thank you for making a difference in the lives of people and families affected by Parkinson's.

Pedaling for Parkinson's
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www.pedalingforparkinsons.ca