

# Research 2012 PDF Grants



The Parkinson's Disease Foundation® (PDF®) is providing support to more than 40 scientific projects in the fiscal year that runs from July 1, 2011 to June 30, 2012, for a total of \$5.5 million.

PDF's philosophy is to empower scientists to use their creativity to find the best solutions for people with Parkinson's. We choose the best proposals among those submitted by seeking input and guidance from leading researchers, clinicians and people living with Parkinson's disease (PD). In this last category, our reviewers are members of PDF's Parkinson's Advocates in Research (PAIR) program. They help to ensure that the projects chosen meet both PDF's mission and the needs of the community.

We are excited about the research we are funding through a process that is scientist-initiated, peer-reviewed, and advocate-advised — one that provides the best road to understanding and solving Parkinson's.

## Center Grants | \$2.62 Million

Allow strong groups of talented scientists the flexibility and long-term support to collaborate on basic, translational and clinical research.

**Columbia University Medical Center** | Roy N. Alcalay, M.D., Robert Burke, M.D., Lorraine N. Clark, Ph.D., Stanley Fahn, M.D., Blair Ford, M.D., Lloyd Greene, Ph.D., Paul E. Greene, Ph.D., Elan D. Louis, M.D., M.S., Karen Marder, M.D., M.P.H., Pietro Mazzoni, M.D., Ph.D., Serge Przedborski, M.D., Ph.D., Seth Pullman, M.D., Yaakov Stern, Ph.D., David Sulzer, Ph.D., Jean Paul Vonsattel, M.D., Cheryl Waters, M.D., Nancy Wexler, Ph.D., Ai Yamamoto, Ph.D.

**Rush University Medical Center** | Brandon R. Barton, M.D., M.S., Bryan A. Bernard, Ph.D., Cynthia L. Comella, M.D., Jennifer G. Goldman, M.D., Ph.D., M.S., Christopher G. Goetz, M.D., Deborah A. Hall, M.D., Katie Kompoliti, M.D., Jeffrey Kordower, Ph.D., Kathleen M. Shannon, M.D., Glenn T. Stebbins, Ph.D., Leo Verhagen, M.D., Ph.D.

**Weill Cornell Medical Center** | M. Flint Beal, M.D., Claire Henchcliffe, M.D., D.Phil., Melissa J. Nirenberg, M.D., Ph.D.

## International Research Grants | \$825,000

Designed to promote innovative research projects that have high potential to significantly advance the knowledge of Parkinson's.

Evaluating the Role of Mitochondrial Dynamics in Parkinson's Disease in an In Vivo Vertebrate Model: Real-Time Live Imaging of Mitochondrial Dynamics in Dopamine Neurons in Whole Zebrafish  
**Sarah Berman, Ph.D., M.D., with Edward Burton M.D., D.Phil., F.R.C.P., University of Pittsburgh**

Impact of Low- and High-Frequency Electrical Stimulation on the Inputs, Integrative Properties and Output of the Subthalamic Nucleus  
**Mark Bevan, Ph.D., Northwestern University**

Telomere Biology in Patients with Incident Parkinson's Disease\*  
**Tobias Kurth, M.D., Sc.D., with Robert Y.L. Zee, Ph.D., M.P.H., Brigham and Women's Hospital**

Identification of Neuroprotective Factors in Tobacco\*  
**Leo J. Pallanck, Ph.D., University of Washington**

Small Aromatic Molecules as Novel Inhibitors of Alpha-Synuclein Aggregation  
**Daniel Segal, Ph.D., Tel Aviv University, Israel**

Identification of Genes for Parkinson's Disease in an Isolated Greek Community and a Greek Population Cohort  
**Georgia Xiromerisiou, Ph.D., M.D., with Henry Houlden, M.D., M.R.C.P., Ph.D., University of Thessaly, Greece and University College, London, England**

## Fellowship & Career Development Grants | \$1.28 Million

Aim to generate interest in Parkinson's research and patient care among basic scientists and clinicians.

### Research Fellowship Projects | \$250,000

Development of a Progressive Neurodegenerative Mouse Model of Parkinson's Disease  
**Ane Korff, Ph.D., St. Jude Children's Research Hospital**

Evaluating Pedunculopontine Nucleus Stimulation as a Treatment for L-Dopa-Resistant Gait Disorders in Advanced Parkinson's Disease  
**Abirami Muralidharan, Ph.D., University of Minnesota**

The Role of Parkin in Regulating Mitochondrial Dynamics and Homeostasis in Cortical and Dopaminergic Neurons  
**Victor Van Laar, Ph.D., University of Pittsburgh**

The Locus Coeruleus as a Substrate for Parkinsonian Cognitive Inflexibility  
**Elena Vazey, Ph.D., Medical University of South Carolina**

\*Denotes second year of funding

(over please)



### Post Residency Fellowship Training | \$720,000

Sheila Rane, M.D., Rush University Medical Center  
Houman Homayoun, M.D., Rush University Medical Center  
David Arkadir, M.D., Ph.D., Columbia University Medical Center  
Christopher W. Hess, M.D., Columbia University Medical Center  
Sheng-Han Kuo, M.D., Ph.D., Columbia University Medical Center  
Alexander Shtilbans, M.D., Columbia University Medical Center  
Sirinan Tazen, M.D., Columbia University Medical Center  
Mary Ann Thenganatt, M.D., Columbia University Medical Center  
Tuhin Virmani, M.D., Ph.D., Columbia University Medical Center

### Summer Student Fellowship Projects | \$45,000

Identifying the Natural and Functional Progression of PD  
Rachel Boehm, mentor Quincy Almeida B.Sc., M.Sc., Ph.D.,  
Wilfrid Laurier University, Canada

R2\* Changes in Substantia Nigra and Dentate Nucleus Related to  
Tremor and Akinetic/Rigid-Predominant Parkinson's Disease  
Christopher DiMaio, mentor Mechelle Lewis, Ph.D., Penn State  
College of Medicine

The Effects of Autophagy Enhancement on Alpha-Synuclein in Vivo  
Darius Ebrahimi Fakhari, mentor Pamela J. McLean, Ph.D.,  
Massachusetts General Hospital/Harvard Medical School

Instability in Persons with Parkinsonism: Assessment and Interventions  
in a Community Setting  
David Galaso, mentor Lee Dibble P.T., Ph.D., A.T.C., University  
of Utah

$\beta$  oscillations in the STN and SNr of Parkinson's Disease Patients  
Vahagn Karapetyan, mentor William D. Hutchison, Ph.D., University  
of Toronto

Cardiovascular Autonomic Dysfunction as an Early Biomarker for  
Parkinson's Disease  
Sung Kim, mentor Sheila Fleming, Ph.D., University of Cincinnati  
College of Medicine

Cognitive Profiles of Parkinson's: Implications for Dementia  
Ivy Miller, mentor Alice Cronin-Golomb, Ph.D., Boston University

Effectiveness of O4 in the Regulation of Toxicity Levels in Parkinson's  
Disease Models  
Anna Norton, mentors Erich Wanker, Ph.D., and Jan Bieschke,  
Ph.D., Charité Medical School of Humboldt University, Germany

Role of Beta-Band Activity within the Internal Segment of the Globus  
Pallidus in Non-Human Primates During a Command/Countermand  
Motor Task  
Shaun Patel, mentor Emad Eskandar, M.D., Massachusetts  
General Hospital

In Vivo and In Vitro Assessment of Urate Modulation by Pyrazinamide  
Matthew Pearce, mentor Michael A. Schwarzschild, M.D., Ph.D.,  
Massachusetts General Hospital

GABAA Receptor Expression Profile and Function in the Globus Pallidus  
Ruth Quintana, mentor C. Savio Chan, Ph.D., Northwestern  
University

Effect of Forced Exercise on Resting State Functional Connectivity  
in Parkinson's Disease  
Chintan Shah, mentor Michael D. Phillips, M.D., Cleveland Clinic  
Foundation

Examination of PGC-1 $\alpha$  and SIRT3 Pathways in LRRK2 and Alpha-  
Synuclein Models of Parkinson's Disease  
Aarthi Subramanian, mentor M. Flint Beal, M.D., Weill Cornell  
Medical College

Potential Abnormalities of Brain Circuits of Parkinson's Disease  
Lirong Tan, mentor Jing-Huei Lee, Ph.D., University of Cincinnati

The Effect of Wii Fitness Training on Postural Imbalance in Patients  
with Parkinson's Disease  
Megan Trager, mentor Helen Bronte-Stewart, M.D., Stanford  
University

### Collaborative Fellowships | \$265,000

PDF-AANF Clinician-Scientist Development Award | \$165,000  
(three years)  
(co-sponsored with American Academy of Neurology Foundation)

Mechanisms of Cell Type-Specific Vulnerability in Synucleinopathy:  
A Yeast-Stem Cell Dual Discovery Platform  
Vikram Khurana, M.D., Ph.D., Massachusetts General Hospital

PDF-PSG Mentored Clinical Research Award | \$100,000  
(Funded by a grant from PDF to the Parkinson Study Group)  
Behavioral Treatment of Anxiety in Parkinson's (BEHTA-PD): A Pilot Study  
Jessica Calleo, Ph.D., mentors Laura Marsh, M.D., and Melinda  
Stanley, Ph.D., Baylor College of Medicine

Genetic and Transcriptional Analysis of Susceptibility for PD  
Neuropathology  
Joshua Shulman, M.D., Ph.D., mentors Philip De Jager, M.D.,  
Ph.D., Lewis Sudarsky, M.D. and Clemens Scherzer, M.D.,  
Harvard/Brigham and Women's Hospital

### Additional Research Programs | \$189,000

Funds innovative collaborative programs, such as the Advancing  
Parkinson's Therapies grant to the Parkinson Study Group to  
facilitate the movement of treatments from "bench to bedside."

### PDF Research Online

- Project Abstracts:  
[www.pdf.org/results\\_funded](http://www.pdf.org/results_funded)
- Bi-monthly Featured Researcher:  
[www.pdf.org/results\\_featured\\_res](http://www.pdf.org/results_featured_res)
- Updates from Dr. Beck on Twitter:  
[www.twitter.com/jbeck\\_pdf](https://www.twitter.com/jbeck_pdf)