Parkinson’s Disease (PD), a progressive neurological disorder arising from degeneration of dopaminergic neurons in the substantia nigra region of the brain, is characterized by impairment of movement control. It progresses from symptoms such as tremor and muscular rigidity to total disability and death. This multidisciplinary conference will focus on the dopaminergic system from a developmental perspective. Conference sessions will focus on the clinical syndrome of PD, pre- and post-natal development of the dopaminergic neuron, molecular modulators in the dopamine system, cellular injury, defenses and compensation, cell biology of the dopamine neuron, genetics and animal models of PD, neurogenesis and cell transfer in PD. The conference’s goals are to improve the understanding of how dopaminergic neurons form, how they mature and respond to genetic and environmental factors, and how they may be regenerated. We hope that greater insights into these aspects of the dopaminergic system ultimately will lead to development of new therapeutic agents and preventive approaches to PD.

Ample time will be provided for discussion and interactions. The conference will include two poster sessions; abstracts for posters are being solicited.

This conference is made possible by an educational grant from the U.S. Army Medical Research and Materiel Command.

Organizing Committee

Howard J. Federoff, M.D., Ph.D. (Chair)  
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and Dentistry, New York

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Columbia University  
New York, New York

Stanley Fahn, M.D.  
Columbia University  
New York, New York

Gary Fiskum, Ph.D.  
University of Maryland  
School of Medicine, Baltimore

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Dr. Med. Sci., M.B.  
Harvard Medical School  
Boston, Massachusetts
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New York, New York

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Emory University
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Bethesda, Maryland

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INSERM U289, Hopital de la
Salpetrière
Paris, France

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Harvard Medical School
Boston, Massachusetts

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Children's Hospital of
Philadelphia, Pennsylvania

Peter T. Lansbury, Jr., Ph.D.
Harvard Medical School
Boston, Massachusetts

Andres Lozano, M.D., Ph.D.
University of Toronto, Canada

Jeffrey D. Macklis, M.D., D.Hst.
Harvard Medical School
Boston, Massachusetts

Eliezer Masliah, M.D.
University of California, San Diego

Ronald McKay, Ph.D.
National Institute of Neurological
Disorders and Stroke – NIH
Bethesda, Maryland

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University of Rochester
Medical Center, New York

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Karolinska Institutet
Stockholm, Sweden

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New York, New York

Aron Rosenthal, Ph.D.
Rinat Neuroscience Group
Palo Alto, California

Horst Simon, Ph.D.
University of Heidelberg, Germany

Ryosuke Takahashi, M.D., Ph.D.
RIKEN, Brain Science Institute
Wako-shi, Saitama, Japan

John Q. Trojanowski, M.D., Ph.D.
University of Pennsylvania
School of Medicine, Philadelphia
**Preliminary Program**

**Tuesday, September 17, 2002**

7:00 – 9:00 P.M. **Registration**

7:15 A.M. **Welcome**

- Rashid Shaikh, Ph.D.,
  New York Academy of Sciences
- Karl E. Friedl, Ph.D.,
  U.S. Army Medical Research and Materiel Command
- Howard J. Federoff, M.D., Ph.D.,
  Conference Chair

8:15 A.M. **Session I:**

- **Clinical Syndrome**
  Session Chair: Stanley Fahn, M.D.
  - Description of PD as a Clinical Syndrome
    Stanley Fahn, M.D.
  - Physiology and Pathophysiology of PD
    Andres Lozano, M.D., Ph.D.
  - PET Studies on the Function of Dopamine in Health and PD
    David J. Brooks, M.D., D.Sc.

10:30 A.M. **Session II:**

- **Development**
  Session Chair: Robert E. Burke, M.D.
  - Midbrain Dopaminergic Neurons: Transcriptional Control of Their Cell Fate
    Horst Simon, Ph.D.
  - Dopamine Cell Specification and Maturation
    Thomas Perlmann, Ph.D.
  - A Role of the Homeobox Genes in the Development of Connectivity of Midbrain Dopamine Neurons
    J. Peter H. Burbach, Ph.D.
  - Postnatal Developmental Programmed Cell Death
    Robert E. Burke, M.D.

12:30 P.M. **Lunch and Panel Discussion I:**

- *Integration of development and clinical issues.*
  Chairs: Stanley Fahn, M.D. and Robert E. Burke, M.D.
  Panelists to be determined
2:00 P.M.  

**SESSION III.**  
FROM MOLECULES TO ORGANISM:  
THE MOLECULES  

Session Chair: Ted M. Dawson, M.D., Ph.D.

The Cast of Molecular Characters in PD: Felons, Conspirators and Suspects  
Ted M. Dawson, M.D., Ph.D.

What is the Connection Between \( \alpha \)-Synuclein Fibrillization and PD  
Peter T. Lansbury, Jr., Ph.D.

Oxidative Modifications of Synuclein  
Harry Ischiropoulos, Ph.D.

Parkin and ER Stress  
Ryosuke Takahashi, M.D., Ph.D.

Dopamine Transporter and Movement Disorders  
Raul R. Gainetdinov, M.D., Ph.D.

Neuropathology of Synuclein Pathology (bridge to the patient)  
John Q. Trojanowski, M.D., Ph.D.

6:00-7:30 P.M.  

**POSTER SESSION I**

**THURSDAY, SEPTEMBER 19, 2002**

8:00 A.M.  
REGISTRATION

8:30 A.M.  

**SESSION IV.**  
FROM MOLECULES TO ORGANISM:  
THE CELLS  

Session Chair: Gary Fiskum, Ph.D.

Mitochondrial Mechanisms of Oxidative Stress and Apoptosis  
Gary Fiskum, Ph.D.

Mitochondria and PD Pathogenesis  
M. Flint Beal, M.D.

Mitochondrial Threats to Dopamine Neurons in PD  
James P. Bennett, Jr., M.D., Ph.D.

Apoptosis Inducing Factor and PARP Mediated Injury in the MPTP Mouse Model of PD  
Valina L. Dawson, Ph.D.

Cellular Models to Study Dopaminergic Injury Responses  
Timothy J. Collier, Ph.D.

Response to Injury at the Cellular Level: Defenses and Compensation  
Howard J. Federoff, M.D., Ph.D.

11:30 A.M.-1:30 P.M.  

**LUNCH AND PANEL DISCUSSION II:**  

*How best to integrate from molecules to man?  
How do we synthesize the different levels of analyses?  
What does this suggest in terms of future approaches to treatment of the disease?*

Chairs: M. Flint Beal, M.D. and  
Ted M. Dawson, M.D., Ph.D.

Panelists to be determined
1:30 P.M.  

**SESSION V.**  
**FROM MOLECULES TO ORGANISM:**  
**THE ORGANISM**  

Session Chair: Howard J. Federoff, M.D., Ph.D.

Progress in Understanding the Genetics of Lewy Body Diseases  
*John Hardy, Ph.D.*

Modulating PD in Drosophila  
*Mel Feany, M.D., Ph.D.*

Transgenic Models of α-Synuclein Pathology  
*Eliezer Masliah, M.D.*

The MPTP Mouse Model: A Tool to Explore the Pathogenesis of PD  
*Serge Przedborski, M.D., Ph.D.*

The Rotenone Model of PD  
*J. Timothy Greenamyre, M.D., Ph.D.*

Pathophysiology of PD: The MPTP Primate Model and the Human Disorder  
*Mahlon DeLong, M.D.*

Role of Glial Reaction and Inflammation in PD  
*Etienne C. Hirsch, Ph.D.*

6:00-7:30 P.M.  

POSTER SESSION II  

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**FRIDAY, SEPTEMBER 20, 2002**

8:00 A.M.  

REGISTRATION  

8:30 A.M.  

**SESSION VI. CONVERGENCE OF CELL GENESIS AND CELL TRANSFER**  

Session Chair: Ole Isacson, Dr.Med.Sci., M.B.

Manipulation of Neural Precursors In Situ: Induction of Neurogenesis  
*Jeffrey D. Macklis, M.D., D.Hst.*

Mechanisms Controlling Dopaminergic Cell Fate in Vertebrates  
*Arnon Rosenthal, Ph.D.*

Redox Modulation of Precursor Cell Function  
*Mark Noble, Ph.D.*

Stem Cells: Their Uses and Limitations  
*Ronald McKay, Ph.D.*

Embryonic Stem Cells to Dopamine Neurons: In Vivo Integration of New Neurons in Dysfunctional Brain Circuitry  
*Ole Isacson, Dr.Med.Sci., M.B.*

11:30 A.M.-1:30 P.M.  

LUNCH AND PANEL DISCUSSION III:  

*Late Breaking Developments: Four to five brief presentations will be chosen from submitted abstracts. General discussion and implications of findings.*  

Chair: Howard J. Federoff, M.D., Ph.D.

CONCLUDING REMARKS AND ADJOURN
CONFERENCE SPECIFICS

Conference Location
Doral Forrestal Conference Center, 100 College Road East,
Princeton, New Jersey 08540 will be the site of this conference.
Telephone: 609.452.7800; Fax: 609.520.0728;
W: www.forrestal.com
The Doral Forrestal is a wooded retreat conveniently located one hour away from
New York City and Philadelphia.

Accommodation Information
Accommodations, including full room and board (beginning with dinner on Tuesday, September 17
and ending with lunch on Friday, September 20) have been arranged with the Doral Forrestal at
a daily room rate of $260 single or $192 double (per person). Rates include New Jersey state tax.
When making your reservation, indicate that you are attending the "Parkinson’s Disease" conference.
Reservation deadline: August 20. Requests received after this date will be accepted on a space and
rate availability basis. Check-in time: 3:00 P.M. Check-out time: 12:00 Noon.

To make a reservation at the Doral, contact reservations at 609.452.7800 or toll free within the U.S.
1.800.222.1131 Please provide major credit card information, when making your reservation.
Individual cancellation requires 24 hours advance notice prior to arrival to avoid a charge of one
night's room and tax.

Day Guests
(Overnight Accommodation Not Required)
Individuals wishing to attend this conference, who do not require overnight accommodation, should
note that there is a daily conference center charge. For your convenience, this charge has been
incorporated into the Academy's day guest conference registration fee, which follows. In order to be
recognized as a participant in the conference, you must remit the registration fee by the deadline
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The Princeton Airporter runs frequent shuttles to and from Newark International Airport (38 miles),
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Special discounts for travel to Academy conferences are available for all attendees and accompanying persons. For information, contact the Academy’s travel company representative: MSW Travel Group, 71 Fifth Avenue –10th floor, Attention: Roslyn Chelouche, New York City 10003. When corresponding, please include your e-mail address for a prompt quote providing the best fare: E:rchelouche@mswtravelny.com; F: 212.329.7299; T: 212.329.7333;7275

Call for Abstracts
Contributed Poster Sessions will form an integral part of the conference program. We would like you to submit an abstract. Accepted abstracts will be published in a booklet distributed to all conference attendees. In addition, selected presenters will be invited to submit a short manuscript for publication in the conference proceedings. Deadline for abstract submission is August 1, 2002. An original abstract, including title, author(s) and affiliations must be typed single-spaced (10pt font or larger) and contained within a rectangle that measures 6" across x 4" down (or 15 cm x 10 cm). An abstract form is not necessary, however, abstracts which do not conform to the required format and faxed abstracts will not be accepted. At the bottom of the abstract page, indicate the conference name and the complete mailing/e-mail addresses and telephone/fax numbers of the presenting author. Mail original abstracts to Renee Wilkerson, Meetings Coordinator, at the New York Academy of Sciences or email: rwilkerson@nyas.org.

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**PARKINSON’S DISEASE**
The Life Cycle of the Dopamine Neuron

**September 18-20, 2002**

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