

Parkinson's disease meeting fosters collaborations for advancing research

By Ernie Hood

NIEHS and the National Institute of Neurological Disorders and Stroke (NINDS) co-sponsored a meeting Nov. 3-4 at NIEHS to develop prioritized recommendations for advancing basic, epidemiological, and clinical research on environmental contributors to Parkinson's disease (PD).

"[Parkinson's Disease: Understanding the Environment and Gene Connection](#)" was designed to bring together experts from across the spectrum of PD science to evaluate the most recent research findings on the impact of environmental factors on PD etiology and to discuss the challenges of translating those findings into public health practice and policy.

NIEHS and National Toxicology Program Director Linda Birnbaum, Ph.D., speaking in person, and NINDS Acting Director Walter Koroshetz, M.D., speaking via webcast, welcomed participants and underscored the important contributions their institutes are making to PD research and translation.

The conference followed a [January 2014 gathering](#)

(<http://www.ninds.nih.gov/research/parkinsonsweb/PD2014/>)

organized by NINDS that dealt mainly with the genetics of PD. After that meeting, two workgroups were organized to ensure that the November event would incorporate the recommendations that emerged from the first meeting while adding environmental considerations. "It wasn't just a follow-up, we wanted to make sure that we gave the environment the attention it deserves with regard to the development of the disease," explained Jonathan Hollander, Ph.D., a program administrator in the NIEHS Genes, Environment and Health (GEH) Branch.

Content-rich proceedings

Day one of the meeting featured presentations and discussions on the themes and recommendations from the clinical and epidemiology workgroup and the basic and mechanistic workgroup.

The first workgroup focused on opportunities to identify environmental factors that affect prodromal or pre-motor PD, disease progression after diagnosis, biomarkers of exposure, diagnosis and progression, and risk factors. The other workgroup described the impact of environmental chemicals on known genetic abnormalities and pathways in PD, and progress in measuring environmental chemicals in human and animal samples.

Two wide-ranging panel discussions comprised the meeting's second day.

The first panel, moderated by GEH branch chief Cindy Lawler, Ph.D., addressed the challenge of integrating PD environmental research across disciplines, with a concentration on encouraging interdisciplinary collaborations.

The second panel, moderated by Population Health Branch administrator Kimberly Gray, Ph.D., focused on translation of basic and clinical PD findings into practice and policy. The panel included several members of the broader PD advocacy community, who provided their perspectives on the challenges and opportunities related to effective translation.

Cross-talk was key

The meeting was a unique mix of people from both hemispheres of the PD research world — the geneticists and the environmental scientists — as well as representatives of the PD advocacy community. "Bringing together people who don't normally interact was intentional," said Hollander. "The most exciting parts of the meeting were the dialogue between the geneticists and the environmental health scientists, and the opportunity to hear very personal stories from a number of people who have PD. The equal representation permeated the entire two days."

"It was great to be able to pull in people from the larger community, to be able to hear their thoughts and concerns, and look at ways we can all work together going forward to shed new light on this devastating disease," Lawler observed.

(Ernie Hood is a contract writer with the NIEHS Office of Communications and Public Liaison.)



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Meeting co-host Birnbaum welcomed participants, noting that NIEHS and NINDS funding combined comprises 76 percent of PD research supported by the National Institutes of Health. She also described several of the recent advances in PD science by environmental health researchers. (Photo courtesy of Steve McCaw)



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Meeting co-host Koroshetz was unable to attend in person, but welcomed participants with a video message from his office in Bethesda, Maryland. (Photo courtesy of Steve McCaw)



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Lawler, left, and Hollander spearheaded NIEHS meeting organization efforts. (Photo courtesy of Steve McCaw)



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Lively discussions were common over the meeting's two days, particularly during panel sessions. (Photo courtesy of Steve McCaw)



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During the panel discussion on translation, NTP Pathologist David Malarkey, D.V.M., Ph.D., spoke movingly about his own young-onset PD. He said that the progression of his disease seems to be fairly slow, and stressed the importance of exercise in slowing PD progression, although it is unclear why it works. (Photo courtesy of Steve McCaw)



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Seating arrangements were randomly generated, so that people who would not normally have the opportunity to interact with each other could do so and discover commonalities leading to potential interdisciplinary collaborations. (Photo courtesy of Steve McCaw)



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Caroline Tanner, M.D., Ph.D., of the University of California, San Francisco co-chaired the clinical and epidemiology workgroup. (Photo courtesy of Steve McCaw)



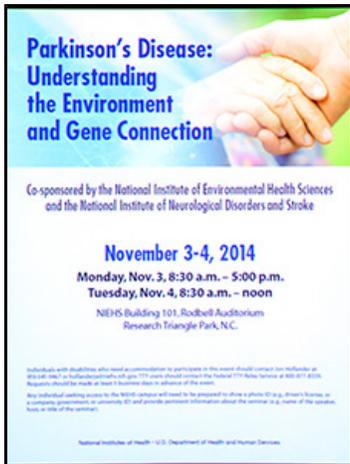
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During the translation panel discussion, University of Pennsylvania clinical epidemiologist and Parkinsonologist Allison Willis, M.D., suggested that more research attention should be paid to sexual dimorphism in PD risk. (Photo courtesy of Steve McCaw)



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Seated beside neurologist Brad Racetta, M.D., center, members of the NIEHS in-house research team, epidemiologists Freya Kamel, Ph.D., left, and Honglei Chen, M.D., Ph.D., right, contributed to the presentations and panel discussions. (Photo courtesy of Steve McCaw)



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More than 60 people attended the meeting in person, with several more logged into the webcast. (Photo courtesy of Steve McCaw)

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