Meeting Title: 12th PDBP Annual Meeting
Sponsor: NINDS

Purpose:

The 2024 NINDS Parkinson's Disease Biomarkers Program (PDBP) Annual Meeting provided a forum for participating scientists and stakeholders to discuss recent progress and emergent opportunities in Parkinson's disease (PD), Lewy body dementia (LBD), and related parkinsonism biomarkers research.

Background:

Since its establishment in 2012, the PDBP has sought to promote the discovery of PD biomarker candidates for early detection and measurement of disease progression. Clinical and biospecimen data are accessible through a common, web-based PDBP Data Management Resources (DMR). Clinical data are associated with biospecimens banked and distributed to the research community through the NINDS Biomarkers Repository (BioSEND). Assay data from biospecimens is also deposited in the DMR for researchers. In addition, blood is also used to generate induced pluripotent stem cell lines (iPSCs) through the NINDS Human Cell and Data Repository (NHCDR). The PDBP serves as a platform for: integrating existing biomarker efforts, standardizing data collection and management, accelerating the discovery of new biomarkers, as well as fostering and expanding collaborative opportunities for all stakeholders with the overarching goal of improving clinical trial design in PD and related disorders.

Summary of meeting discussion:

The 2024 NINDS PDBP Annual Meeting (virtual) was held on October 16th, 2024. Principal investigators, clinical coordinators, and data management experts from each PDBP project, as well as representatives from the National Institutes of Health (NIH) met to discuss biomarkers research and progress made over the last twelve months.

The meeting began with opening remarks and study updates focused on the development of blood-saliva biomarkers, oligogenic biomarkers in a specific genetic cohort of PD patients, and updates on the AT-HOME PD2 study (Assessing Tele-Health Outcomes in Multiyear Extensions of PD Trials). This session also included a study that utilized the AMP-PD and TriNetX databases to study PD, as well as a talk on biomarker validation studies using automated imaging differentiation of parkinsonism.

Investigators that are part of the NINDS Udall Centers of Excellence for Parkinson's Disease Research provided their study updates. They described emerging research that studied cholinergic changes and cognition in PD and used glycolysis-enhancing drugs for PD.

The meeting concluded with presentations from investigators that highlighted their LBD studies. Investigators talked about their Dementia with Lewy Bodies (DLB) spectrum imaging biomarkers study, the U.S. Dementia with Lewy Bodies Consortium (DLBC), and protein biomarkers of corticolimbic pathophysiology in LBD.

Conclusions:

A number of efforts from PDBP investigators (https://pdbp.ninds.nih.gov/projects-we-support) are underway towards PD biomarker discovery and validation in the areas of clinical phenotyping, neuroimaging, genomics, transcriptomics, proteomics, and metabolomics. Concurrently, the DMR continues to serve as a central resource for well-characterized clinical data as well as associated biospecimens collected and processed in a standardized manner. As the PDBP enters its thirteenth year, additional genomics and neuroimaging data will be available in the DMR, including proteomic data and neuropathology data. Furthermore, as new and existing collaborative efforts continue to grow among PDBP and Udall investigators, AMP-PD and industry partners, so too will the contributions towards the advancement and discovery of PD biomarkers.

Note: Additional links may be added over time to include published proceedings, formal recommendations, etc.

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