



Meeting Title: 8th PDBP Annual Consortium Meeting

Sponsor: NINDS

Purpose:

The 2020 Parkinson's Disease Biomarker 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 Parkinsonisms biomarker 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 Resource (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 2020 PDBP Annual Consortium Meeting was held virtually on August 17-18, 2020. Principal Investigators (PIs), clinical coordinators and data management experts from each PDBP project, PDBP participants and caregivers, as well as representatives from the National Institutes of Health (NIH), PD nonprofit organizations, and the pharmaceutical industry met to discuss progress over the last twelve months in addition to current and future plans for the program.

The meeting agenda began with an overview of the PDBP program and the DMR. This was followed by presentations on telehealth, including discussions on emerging clinical trials in the era of COVID-19. This session also included an update on the AT-HOME PD study (Assessing Tele-Health Outcomes in Multiyear Extensions of PD Trials).

A patient panel discussion was held where patients shared their experiences and participation in Parkinson's disease and Lewy Body Dementia biomarkers discovery research. This was followed by a broad industry panel discussion that included topics on digital biomarkers,



devices, and mobile telehealth technologies, as well as clinical trials for movement disorders.

The importance of engaging minority participants in clinical research was highlighted. Challenges and lessons learned were shared regarding inequity in precision medicine and recruitment and retention in PD, LBD, and Parkinsonisms clinical research.

Two breakout sessions were held, one for site clinical coordinators to obtain feedback and discuss ongoing issues and opportunities for collaboration across PDBP sites. The other session provided a tutorial for the [Accelerating Medicines Partnership in Parkinson's Disease \(AMP-PD\) Knowledge Portal](#). AMP-PD is a public-private partnership between the NIH, multiple pharmaceutical and life sciences companies, and non-profit organizations, managed through the Foundation for the NIH (FNIH) to identify and validate diagnostic, prognostic, and/or disease progression biomarkers for PD. The Knowledge Portal includes harmonized clinical data along with whole genome sequencing and transcriptomics datasets from four PD unified natural history cohorts ([BioFIND](#), [HBS](#), [PDBP](#), and [PPMI](#)), with future data to be released in late 2020.

Day two of the meeting started with three study updates focused on biomarker discovery in a genetic cohort of Parkinson's disease patients, and the development of blood and skin-based biomarkers.

Other presentations provided updates for PDBP Discovery and PDism projects that focused on metabolomics, plasma markers, neuroimaging biomarkers, genome-wide studies, and exosomal characterization. Investigators also highlighted their LBD studies on multimodal imaging approaches, transcriptomics, and therapeutic biomarker targets.

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 ninth 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 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.



Meeting Contacts: Debra Babcock (dbabcock@ninds.nih.gov), Christine Swanson-Fischer (christine.swanson-fischer@nih.gov), and Hsiao Yu (Christina) Fang (christina.fang@nih.gov)