Meeting Title: 7th PDBP Annual Consortium Meeting
Sponsor: NINDS

Purpose:

The 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, Lewy Body Dementia 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 biosample data are housed in 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). Blood is also used to generate 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 PDBP Annual Consortium Meeting was held August 12-13, 2019 in Rockville, MD. Principal investigators (PIs), clinical and data management experts from each PDBP project, and representatives from the 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 as well as the DMR. This was followed by presentations from three new studies focused on biomarker discovery in a genetic cohort of Parkinson's disease patients, in Atypical Parkinsonisms, and on the development of skin-based biomarkers.

Additional topics included study updates from PDBP Discovery Projects utilizing platforms such as transcriptomics, methylation profiling, mobile telehealth technologies, digital immunoassays, and exosomal characterization. Emerging results from investigators focused on deep phenotyping and multimodal imaging approaches for Lewy Body Dementia were also highlighted.

Research from young investigators was showcased in a poster session and a breakout session was held for site clinical coordinators to obtain feedback and discuss recruitment issues.

Day two of the meeting featured a session highlighting lessons learned from the Alzheimer's Disease biomarker field, developments in understanding the structural biology of alpha-synuclein and advances in PET ligand development. A session was also held focused on bioinformatics approaches to facilitate biomarker discovery and an overview of the Accelerating Medicines Partnership in Parkinson's Disease (AMP-PD). 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).

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, imaging, genomic and transcriptomics, and 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 eighth year, additional genomics and neuroimaging data will be available in the DMR, including whole genome sequencing, 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.

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