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Office of Technology Management

PLASMA-BASED CFRNA BIOMARKERS FOR PARKINSON'S DISEASE

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Value Proposition: *Plasma cell-free transcripts that can be used as biomarkers to aid in the diagnosis and monitoring of Parkinsons Disease.*

Technology Description

Researchers at Washington University in St. Louis have developed a panel of cell free RNA (cfRNA) biomarkers in the blood that accurately discriminated between healthy and PD patients. Clinical and imaging-based diagnostics remain the only approved methods to diagnose Parkinson's Disease (PD). A blood-based test will greatly reduce the barriers to testing.

These biomarkers can be used to determine disease severity, offering the potential for prognosis as well as monitoring of PD.

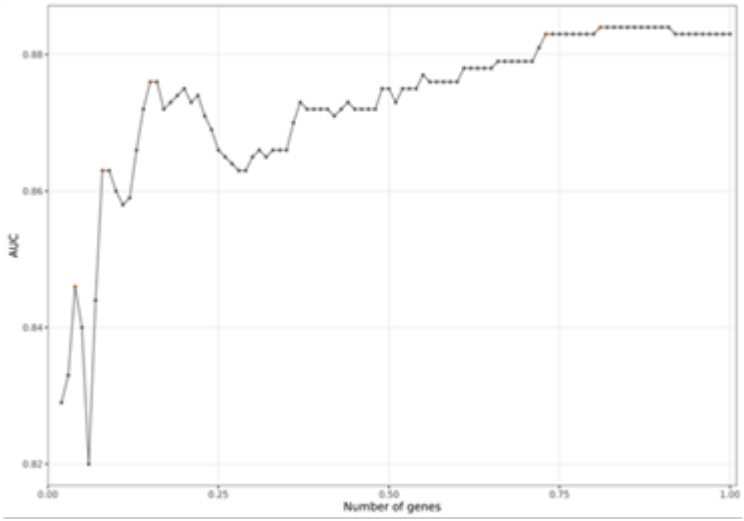

Figure –Feature selection and model building using different subsets of cfRNA transcripts

Stage of Research

Specific biomarker panels identified, using subsets of biomarkers containing 21, 51, 208, and 214. All have AUC > 0.85. Prediction models are being further optimized and validated.

Applications

- PD diagnosis, screening, and disease progression monitoring.

Key Advantages

- Models built using specimens from two movement centers, along with publicly available datasets. High concordance of model performance across different datasets.
- Non-invasive approach that simplifies screening, diagnosis, as well as patient selection for clinical trials.

Patents

Provisional patent application filed.

Related Web Links: Laura Ibanez Ph.D. Lab Link and Profile Link