Global Neurodegeneration Proteomics Consortium

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Can we accelerate drug discovery and diagnostic development for millions of dementia patients by measuring 300,000,000 proteins across multiple neurodegenerative diseases?

The Global Neurodegeneration Proteomics Consortium (GNPC) has brought together top dementia researchers from around the world to collaborate on proteomic and associated clinical data analysis to transform patient trajectories and improve quality of life.

The GNPC v1 Harmonized Dataset is now available on the AD Discovery Portal, enabling large-scale proteomic data sharing at scale.

~35,000 proteomic samples fully anonymized and over 50 clinical features focusing on:

- Healthy aging
- Alzheimer's disease (AD)
- Parkinson's disease (PD)
- Amyotrophic lateral sclerosis (ALS)
- Frontotemporal dementia (FTD)

Scan to read the series of 6 articles on the GNPC published with Nature family journals

Apply here to access the v1 Harmonized Data Set on the AD Workbench

GNPC Research Aims & Goals

Unite proteomics data across neurodegeneration cohorts
To bring together diverse data and top dementia researchers to collaborate on **the largest protein biomarker discovery effort to date**

Establish a framework for data sharing
To leverage secure cloud-based data sharing structures and **solve cross-cohort data harmonization headaches** via a generalizable model for data contribution and secure harmonization

Attract future cohorts
To provide **rapid, mutual access to shared data** and promote dataset growth by encouraging **straightforward addition of future diverse cohorts.**

What's Next? GNPC vMultiplatform (vMP) measures >22,000 samples and >300,000,000 proteins across 4 proteomic assays

Multiple proteomic data platforms matched on each sample
SomaScan 11k, Olink HT, Alamar Biosciences (NULISA CNS & Inflammation)

Greater geographic diversity
Expanding the participating cohorts with studies based in Africa, Latin America, East Asia, and South Asia

Inclusion of interventional cohorts
Growing beyond observational data by bringing in studies with behavioral and lifestyle modification as well as pharmacological interventions (e.g. anti-amyloid therapies)

New data informatics partners
Integration **of new automated data analysis pipelines** (low-code/no-code) via GRIP, digital twin modeling, and **novel AI/ML model development**

New funding partners
GNPC vMP is made possible with support from **philanthropic and industry partners**, including Gates Ventures, Janssen Research & Development LLC, a Johnson & Johnson company, ADDF's DxA, GSK plc., the Robertson Foundation, Sanofi, and the Shanahan Foundation.

HDS Version Life Cycle

Data Contribution and Harmonization
Contributor data is harmonized and anonymized into a single Harmonized Dataset.

The consortium utilizes workspaces on the AD Workbench to securely share and harmonize the data.

Embargo Period
GNPC Consortium members receive 12 months of early access to the HDS to report on summary findings.

Public Release
After one year of intra-consortium analysis, the HDS is released to the research community as a shared global resource for approved use and users.

The **v1 HDS** is now available on request via the AD Workbench.

The **vMP** will be available Summer 2027

The GNPC v1 was made possible by support from Gates Ventures and Janssen Research & Development LLC, a Johnson & Johnson company, who support its management and continual growth on an annual cycle. Additional contributions come from the AD Data Initiative to provide a secure cloud-based environment, and support for proteomic data generation from: ALS TDI, Answer ALS, British Heart Foundation, EU/EFPIA Innovative Medicines Initiative Joint Undertaking, the Michael J. Fox Foundation, Merck the National Institutes of Health (NIH), the National Institutes of Aging (NIA), Takeda, and Welcome Trust UK.