Unlocking the **Power** of Fluid Biomarkers

ALAMAR BIOSCIENCES

The potential of protein biomarkers

Fluid-based protein biomarkers hold great promise in the development of non-invasive assays for early detection of disease and therapeutic monitoring. However, detecting low abundance biomarkers in complex solutions such as plasma is challenging and signifies the need for both ultra-high sensitivity detection as well as the ability to measure proteins across a broad dynamic range.

Alamar Biosciences

Turning biofluids into liquid gold

Alamar's mission is to enable early detection of disease with automated, high-sensitivity protein analysis across a range of multiplex levels that supports the translation of important biomarkers from discovery to the clinic.

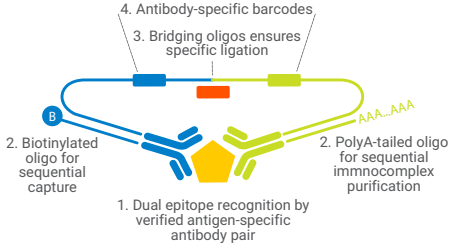
- **Unparalleled, low fg/mL sensitivity** enables the measurement of critical low abundance biomarkers within complex matrices such as serum and CSF
- **Flexibility** to assay single markers or multiplexed panels of 10's to 1,000's of proteins spanning up to 12 logs dynamic range using the same robust chemistry and automated system
- **High reproducibility**, with less than 10% CV, ensures consistent results across experiments and assays
- **Fully-automated system**, with less than 30 minutes hands-on time, allows for easy implementation across a variety of lab types

NULISA™ Platform

Experience the new gold standard in protein detection

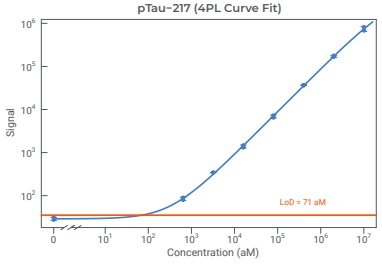
Highly specific

with four elements of specificity built into every assay



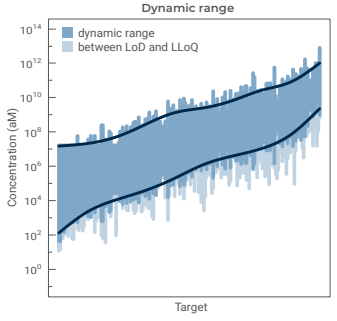
Unparalleled sensitivity

to detect critical biomarkers at low to sub fg/mL levels



Broad dynamic range

enables measurement across ~12 logs without sample dilution



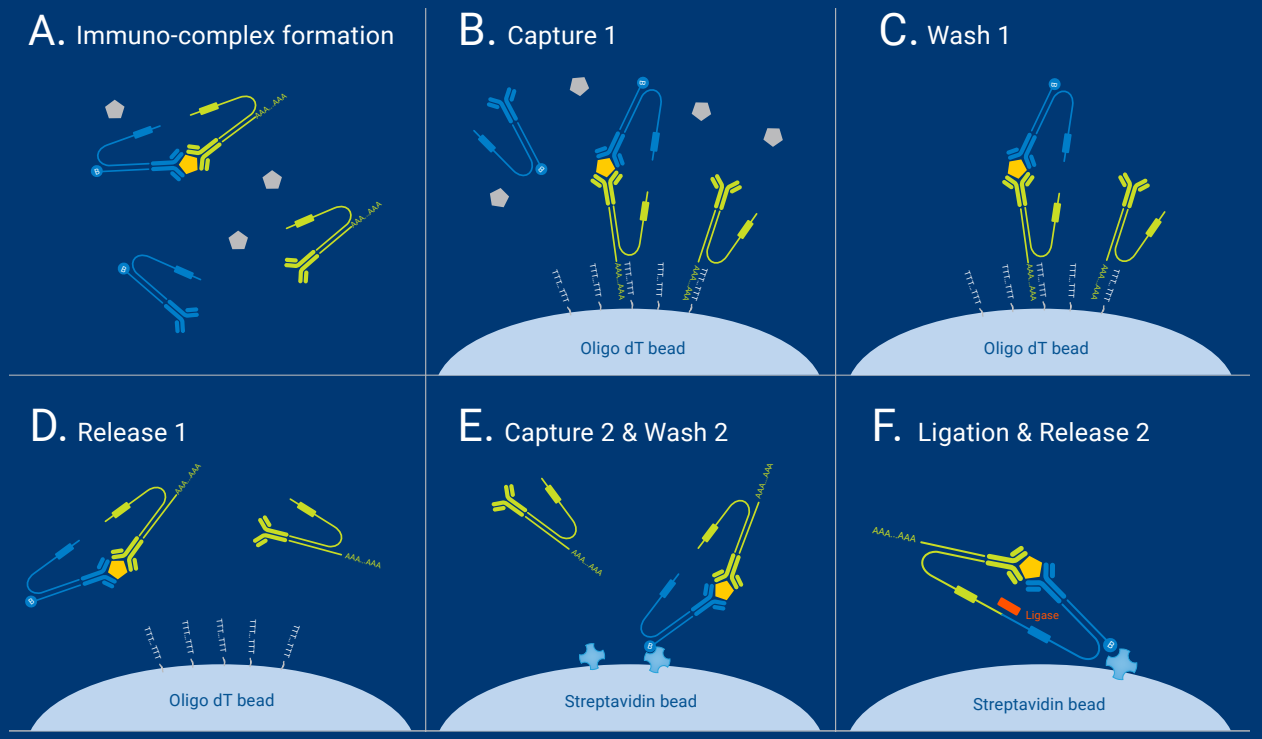
Highly reproducible

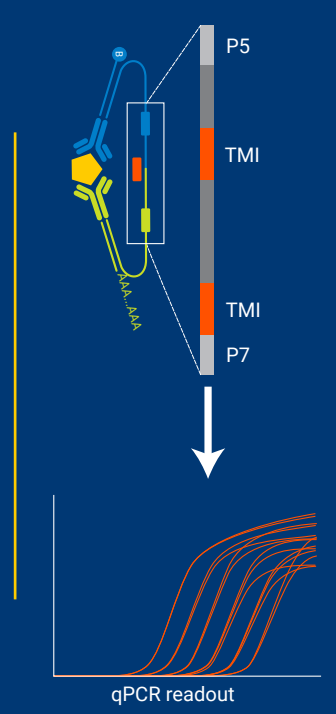
with less than 10% intra- and inter-plate CV

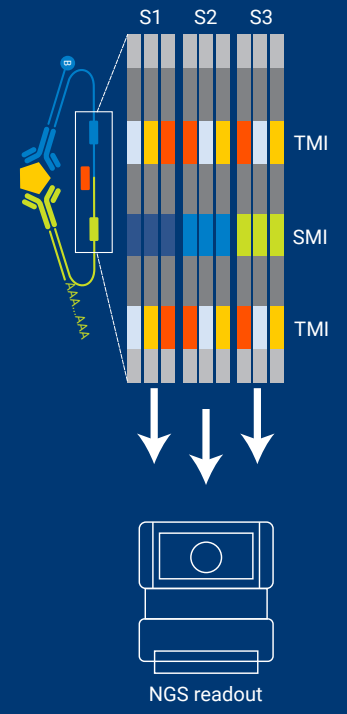
	Intra-plate	Inter-plate
mean CV	7.3%	7.9%
median CV	6.2%	6.2%

Increasing sensitivity by removing background noise

NULISA redefines the immunoassay with unique dual capture and release workflow







ARGO™ HT System

Proteomics at the push of a button

A fully automated, high-throughput platform, the ARGO HT System facilitates the analysis of large cohorts or clinical studies with industry leading simplicity and reproducibility. An all-in-one instrument with integrated qPCR system takes you from sample to data or to pooled NGS library in one day.

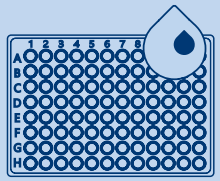
- **Fully automated workflow** with <30 minutes total hands-on time
- **High-throughput capacity** with flexibility to process up to three 96-well plates per run batch
- **Rapid results** in <8 hours for single-plex qPCR assays and <16 hours for multiplex NGS panels
- **Lyophilized reagents** for easy storage and longer stability
- **Integrated software and data analysis** transforms data into biological insights and publication-ready results

Fully automated workflow with the ARGO™ HT System

1
CREATE
Design run and queue for ARGO HT

< 10 minutes

2
LOAD
Prep sample plate and load instrument

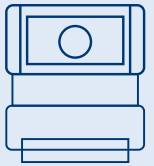


< 10 minutes hands-on time

3
RUN
Sample to qPCR results or pooled NGS library

< 8 hours

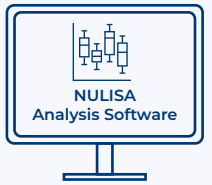
4
NGS
Pooled library to FASTQ*



~ 8 hours

*Sequencing step only required for multiplex results.

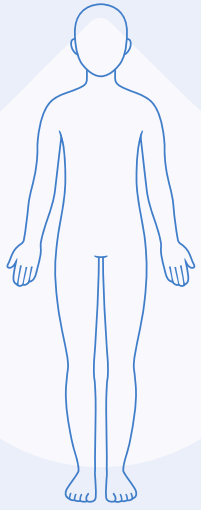
5
ANALYZE
Integrated analytics



Discover biomarkers of disease progression and therapeutic response

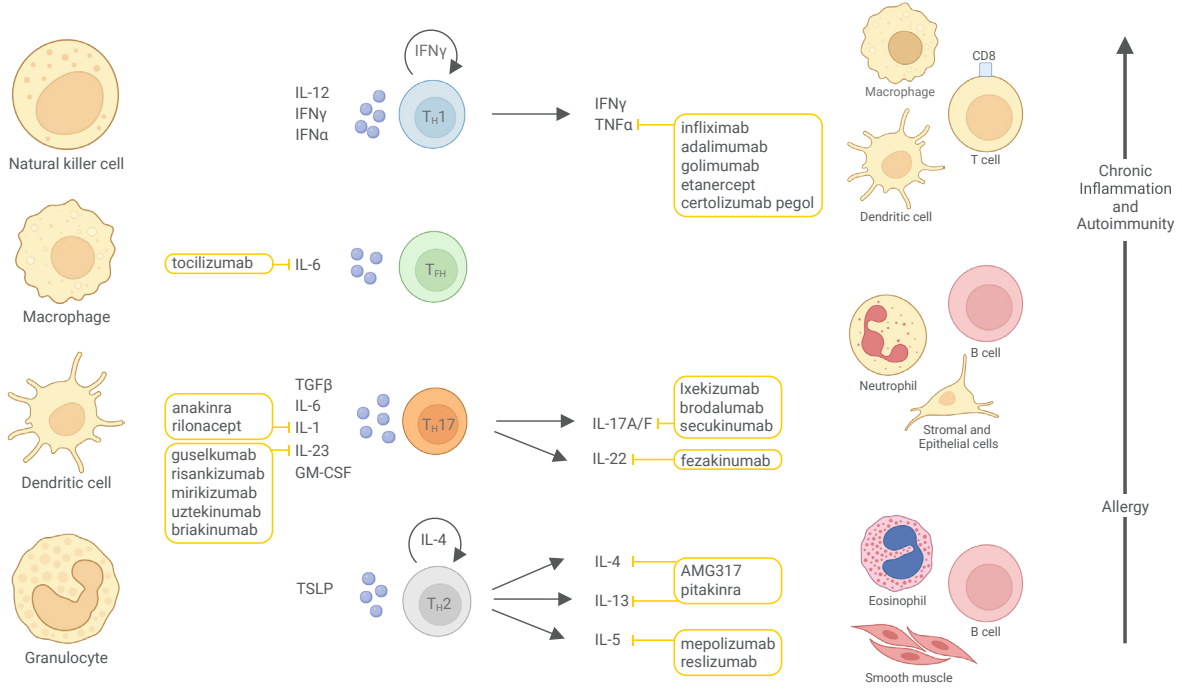
Inflammation and dysregulation of the immune response are at the root of most human diseases

Addison's Disease
Allergy
Asthma
Cancer
Cardiovascular
Celiac Disease
Crohn's Disease
Grave's Disease
Infectious Disease
Lupus



Multiple Sclerosis
Myasthenia Gravis
Neuro-degeneration
Psoriasis
Rheumatoid Arthritis
Sjogren's Syndrome
Type 1 Diabetes
Ulcerative Colitis

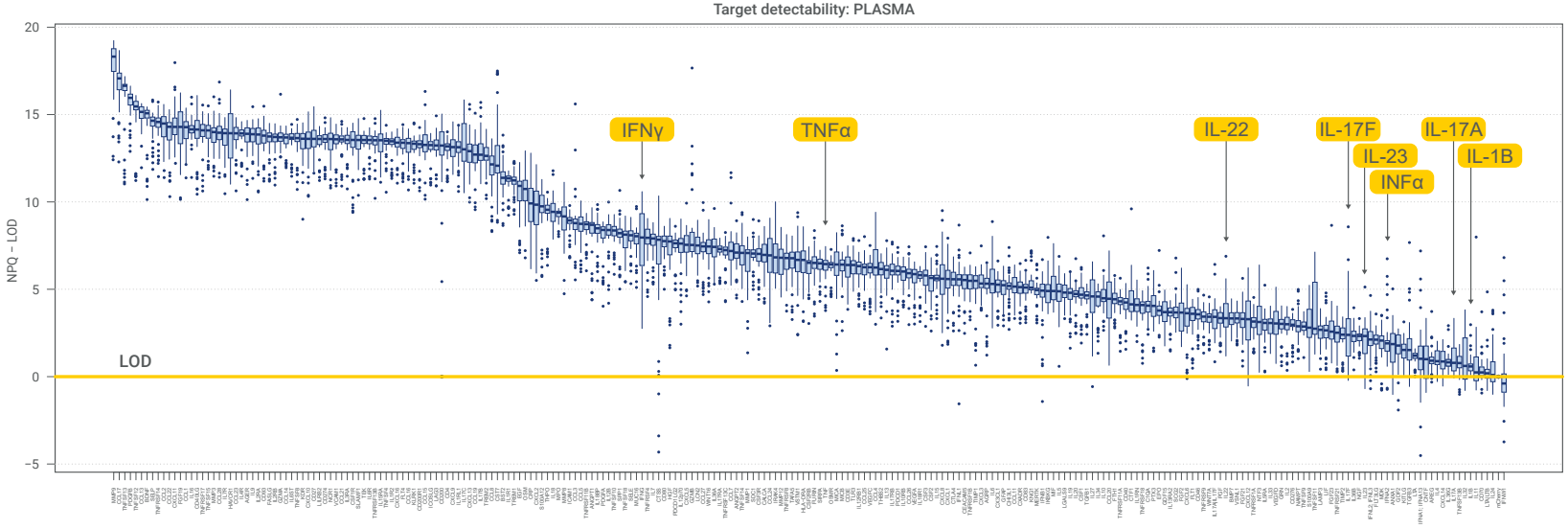
Cytokines are key modulators of inflammation and the target of many therapeutics



NULISAseq™ Inflammation Panel 250

The power of deep profiling of immune function

Broadest coverage of cytokines and chemokines with the highest sensitivity to detect important low abundance biomarkers



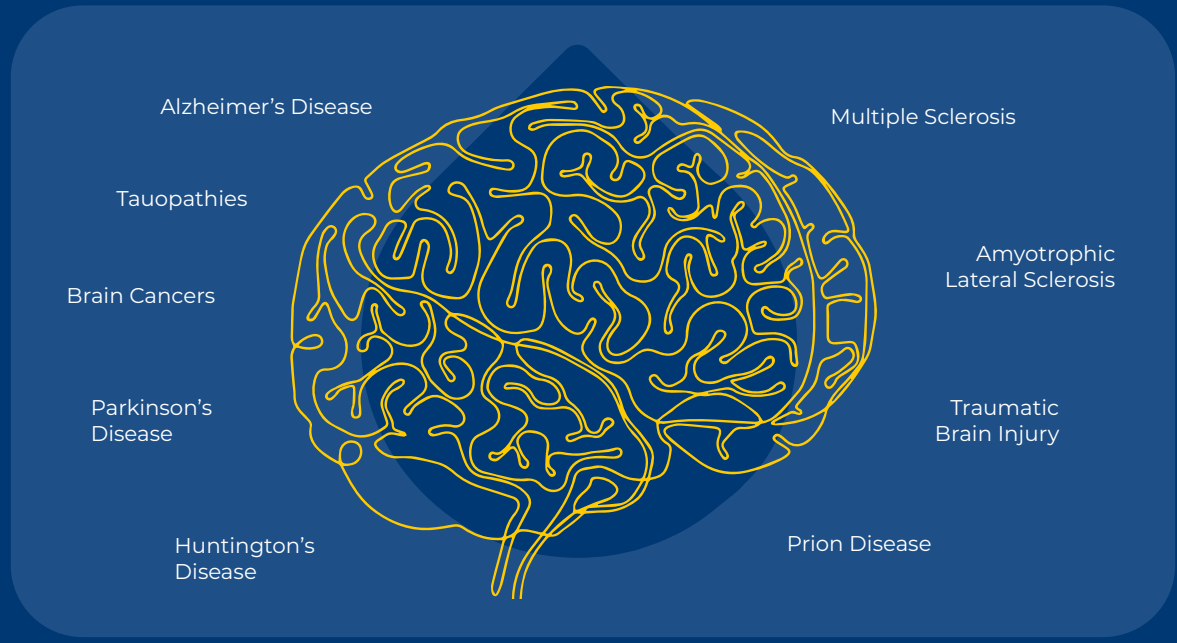
- Assay **~250 proteins** from as little as 10µL
- **Attomolar sensitivity** to measure proteins at low fg/mL levels
- Up to **12 logs dynamic range** without the need to dilute samples
- **Highly reproducible** with <10% intra- and inter-plate CV

NULISAseq™ CNS Disease Panel 120

Earlier detection and discrimination of disease subtypes

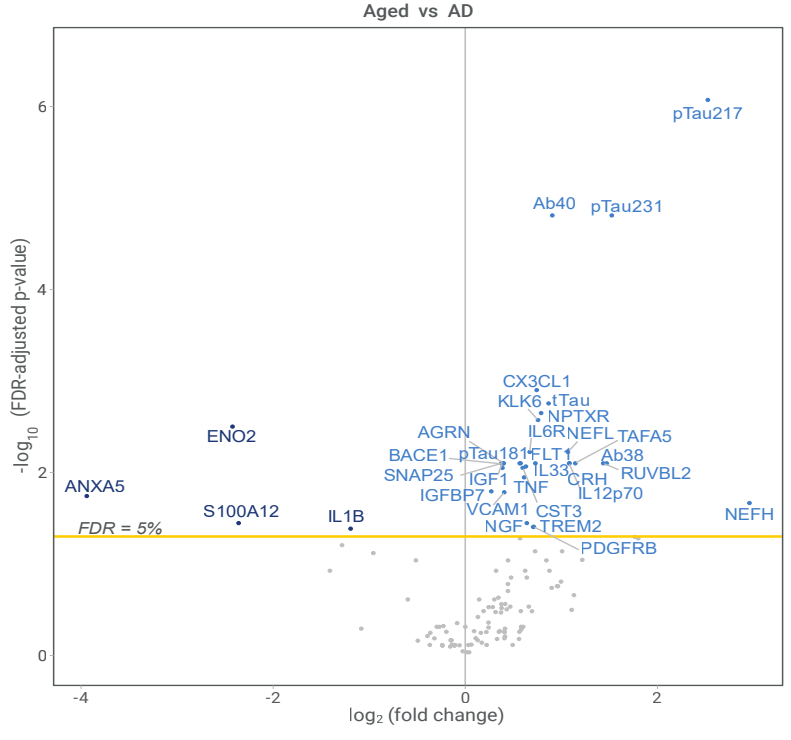
Comprehensive panel designed by experts to cover major hallmarks of CNS disease

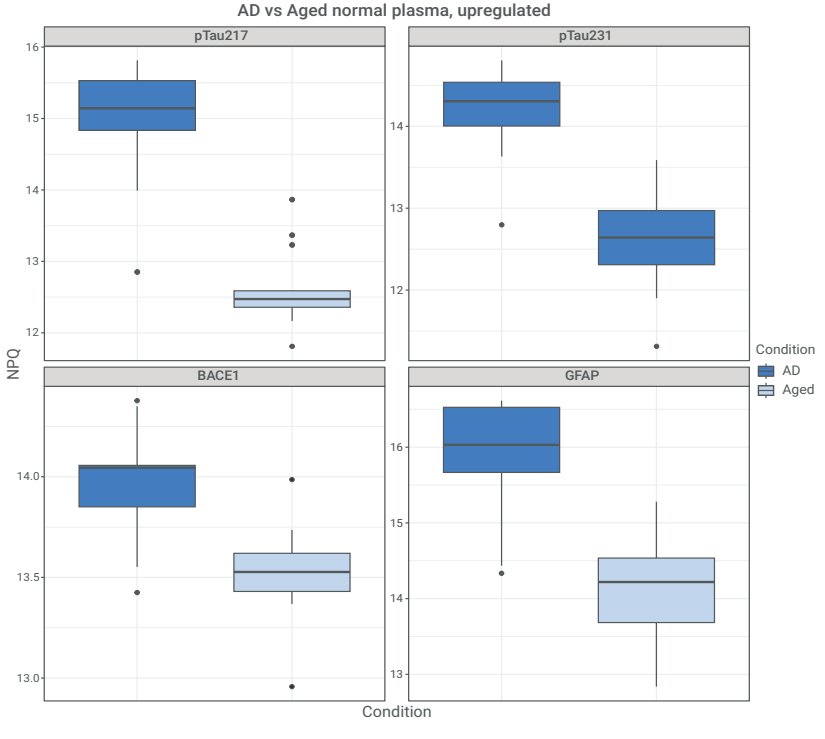
- Measure ~120 proteins from as little as 10uL sample
- Detect key low abundance biomarkers such as pTau-217 with attomolar (fg/mL) sensitivity
- Measure changes in key biological processes underlying CNS disease including: synaptic and neuronal network defects, pathogenic protein aggregation, aberrant proteostasis, neuronal cell death, altered energy homeostasis, and inflammation
- Analyze data across large cohorts and multiple labs with high reproducibility (<10% inter-plate CV)



The power to profile CNS biomarkers at the lowest limit of detection

Detect critical biomarkers of Alzheimer's Disease at the lowest limit of detection





NULISAqpcr Single-Plex Assays

Ultra-high sensitivity measurement of your most informative biomarkers

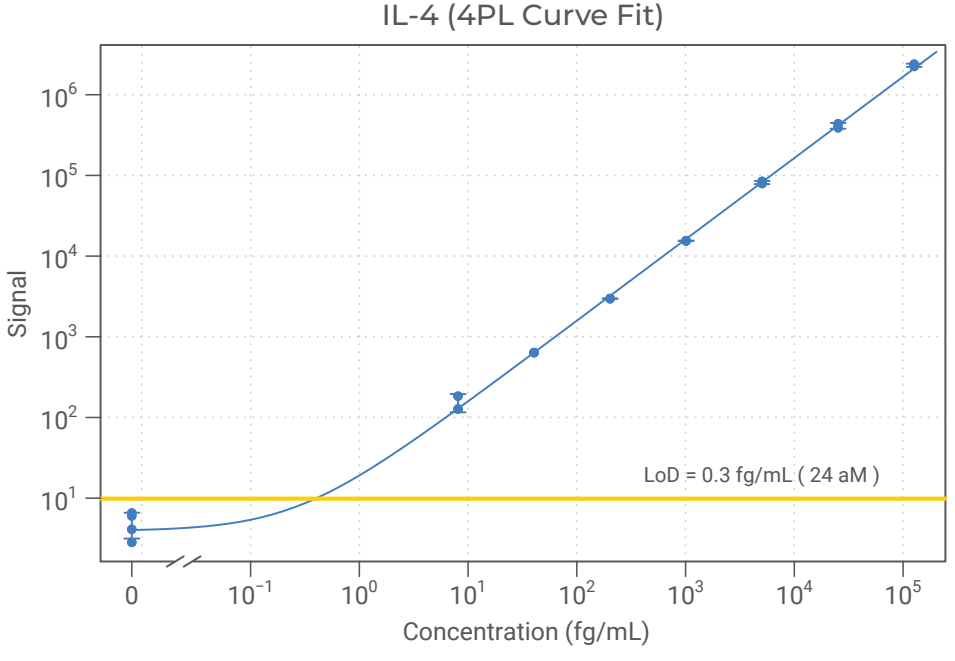
Inventoried

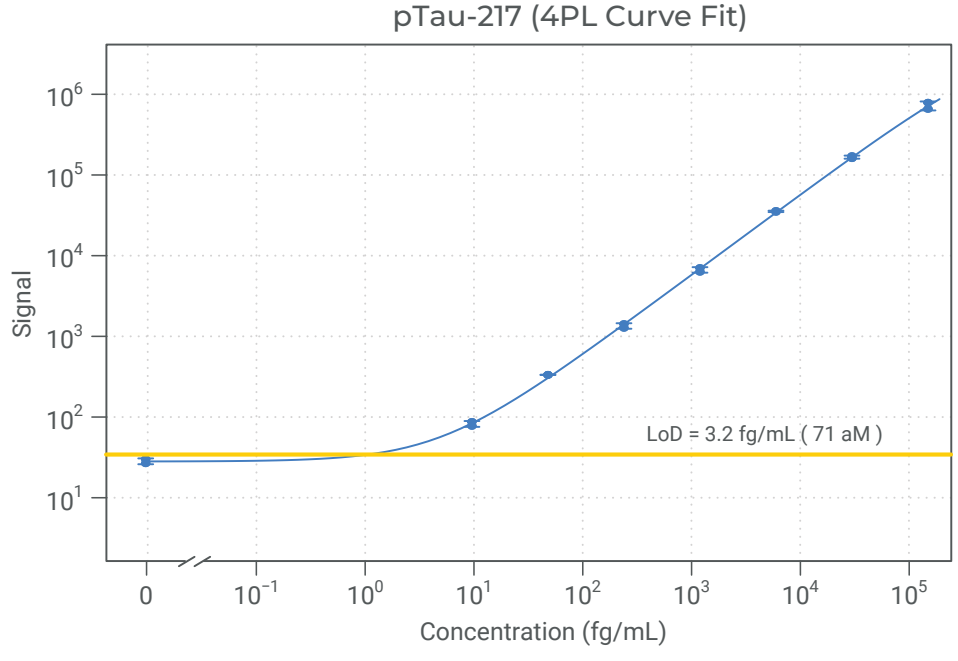
- GFAP
- IL-1B
- IL-4
- NfL
- pTau-217

Made-to-order

- Aβ40
- Aβ42
- CCL26
- IFNg
- IFNL1
- IL-2
- IL-5
- IL-6
- IL-8
- IL-10
- IL-12p70
- IL-13
- IL-17A/F
- IL-17C
- IL-17F
- LIF
- pTau-181
- TDP43
- TNFα
- tTau
- UCHL1

Detect important low abundance proteins with attomolar sensitivity (low fg/mL)



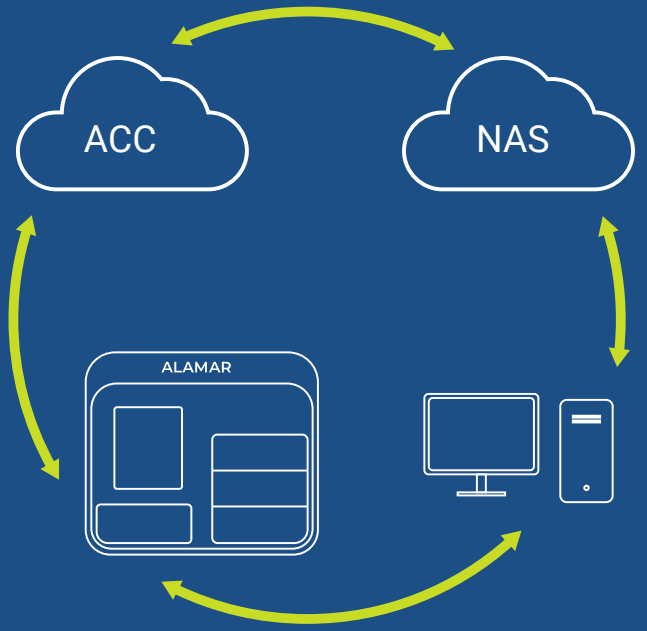


Alamar Analysis Solutions

Streamline time to result with integrated analysis

ARGO Command Center

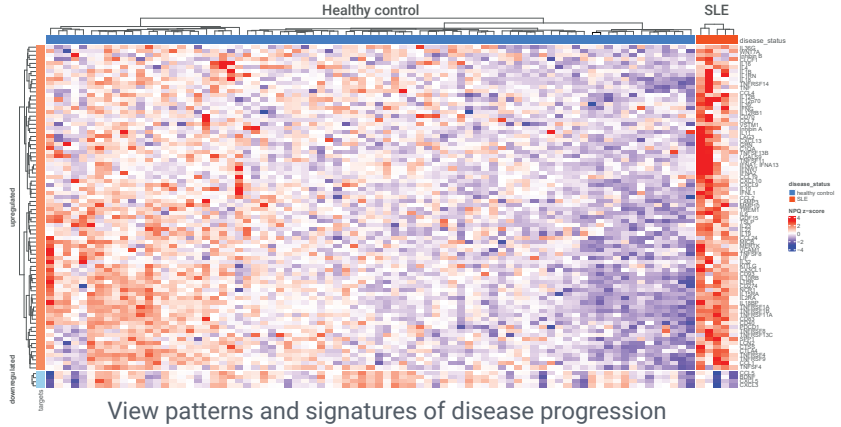
- Quickly set up experiments and manage sample annotations
- Manage runs and remotely monitor run status
- Ensure data security and confidentiality with group management permissions
- Automatic QC and analysis of single-plex results



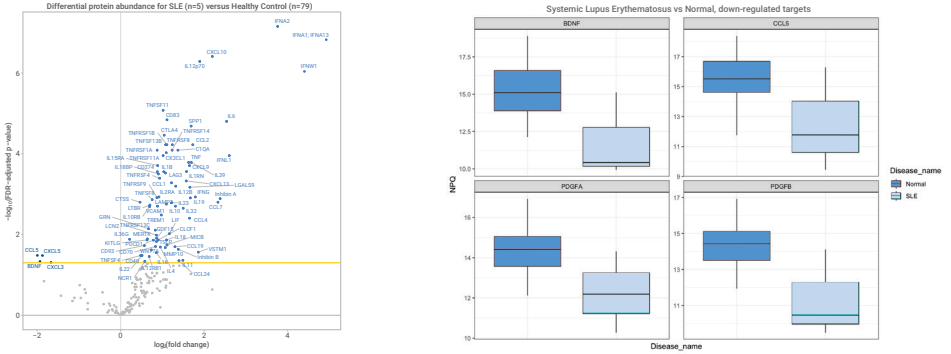
NULISA Analysis Software

- Perform QC and data normalization for multiplex panels
- Combine data from multiple runs into a single analysis
- Advanced statistical tools for the discovery of novel biological insights
- Generation of publication-ready figures

Quickly generate biological insights and publication-ready figures



View patterns and signatures of disease progression



Identify differentially expressed biomarkers in disease samples.

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