Proteomic Infrastructure for Drug Development Programs

Drug Development Partnership Overview

BioTAS generates decision-grade, systems-level proteomic data to strengthen mechanistic validation, enhance pharmacodynamic resolution, and reduce clinical development risk.

WHO WE ARE

Proteas Health is a U.S.-based biotechnology company delivering the BioTAS™ platform — a globally patented blood proteomics infrastructure engineered for structured integration across therapeutic development phases, from preclinical validation through Phase III clinical trials.

BioTAS integrates proprietary remote blood collection and room-temperature plasma stabilization with high-resolution quantitative mass spectrometry and computational modeling to generate reproducible longitudinal systemic response data.

Designed for decentralized and hybrid clinical trials, the platform enables scalable deployment and seamless progression from exploratory profiling to assay-defined clinical implementation.

HOW WE SUPPORT DRUG DEVELOPMENT

Mechanism-Informed Translational Profiling

- Systems-level pathway activity analysis
- Target engagement and pharmacodynamic characterization
- Longitudinal systemic response modeling across treatment phases

Clinical Trial Integration (Phase I–III)

- Assessment of on- and off-target systemic effects
- Dose–response and exposure–response modeling
- Treatment-response stratification to strengthen regulatory submissions

Companion Diagnostic Strategy

- Development of quantitative protein signatures from longitudinal plasma profiling
- Targeted assay development and analytical validation
- CLIA-aligned deployment or laboratory transfer for clinical implementation

PLATFORM STRENGTHS

Globally Patented Infrastructure

BioTAS protected under PCT/US2021/063407.

Affinity-Independent Quantitative Measurement

Mass spectrometry–based plasma proteomics beyond predefined affinity panels.

Systems-Level Modeling Architecture

Integrated computational analysis of pathway modulation, kinase activity, and regulatory network dynamics.

Multiplexed Quantitative Sensitivity

Isobaric labeling enables simultaneous cohort-level analysis, improving statistical confidence and enabling detection of subtle abundance shifts.

Regulatory-Grade Analytical Traceability

Standardized workflows and controlled pre-analytical handling designed to support regulated clinical environments.

Decentralized Trial Compatibility

Low-volume plasma requirements with controlled pre-analytical stabilization for multi-site clinical integration.

Structured Translational Progression

Discovery → signature definition → quantitative assay development → clinical-scale deployment.

SELECTED EXPERIENCE

Phase I CNS Small Molecule — First-in-Human

Longitudinal plasma and CSF profiling to define systems-level pharmacodynamic response and mechanistic modulation during early clinical evaluation.

Cardiovascular Translational Program

Design and validation of quantitative plasma protein assays for coronary risk assessment with scalable clinical integration.

Infectious Disease Clinical Research

Quantitative profiling of immune pathway modulation within regulated clinical trial cohorts to define treatment-associated biological response.

TRANSLATIONAL CONTINUITY

Unlike panel-restricted or cross-sectional profiling approaches, BioTAS is engineered for longitudinal systems-level measurement across development phases. The platform preserves analytical consistency from early mechanistic studies through clinical-scale assay deployment, enabling continuity of quantitative signal and structured advancement toward regulatory-grade implementation.

COLLABORATION

We partner with pharmaceutical and biotechnology organizations to integrate scalable proteomic infrastructure into active drug development programs.