nanoString

Cell & Gene Therapy Solutions

Addressing Needs Across the Drug Development Continuum

	Discovery	Pre-Clinical Development	Manufacturing/ Biomanufacturing	Clinical Development	Post Market Monitoring
Primary Objectives	**Design & Create** • CAR-T construct • Gene Knock-in/out • Pluripotent stem cells	**Confirm targeting** • Confirming targeting • Biodistribution • Optimizing design • Profile for toxicities	**Production** • Robust and Reproducible Therapeutics • Efficient workflow • Modernized Analytics	**Clinical Trials** • Human Testing • Ph I / Ph II / Ph III • Safety, Efficacy Response	**Pharmacovigilance** • Monitoring for adverse events
Unmet Needs	**Exploring** • Target potential • Off-target effects • T-cell response • Innate immune response	**Optimizing** • Efficiency of delivery & transfection • Safety & toxicity • Characterizing immune response • Combination therapy studies	**Analytical Testing** • Cell quality/purity • Sterility/Contamination • Potency • Dosing • Characterizing the T-cell response	**Profiling Response** • Characterizing response to treatment • Characterizing innate & adaptive response	**Monitoring** • Durability • Toxicities

Navigating The Many Challenges

Assay Modernization
Time to results
Quality & Consistency
Product Functionality & Efficacy
Biomarker identification
Regulatory Compliance
Dosing/Safety/ Toxicity

Creating Novel Solutions

Three Platforms. Unlimited Potential

nCounter® Pro Analysis System

800+ plex pathway-based gene expression analysis in a single tube.

GeoMx® Digital Spatial Profiler

Morphological, spatial context for whole transcriptome and proteomics experiments from a single FFPE or Fixed/Fresh Frozen tissue section.

CosMx™ Spatial Molecular Imager

Single cell profiling for RNA and proteins. Compatible with a single FFPE or Fixed/Fresh Frozen tissue section.

Modernize Testing

- Improve time to results
- Characterize early and concurrently throughout drug development.
- Consolidate & customize assays

Improve Product Quality

- Achieve consistent in-process results
- Design manufacturing efficiencies for speed
- Develop menu of assays using reliable platform
- Fully automated workflow

Characterize upstream and downstream of manufacturing

- Identify the right drug target & candidate
- Discover biomarkers of response, and safety
- Accurately measure biodistribution and MOA with spatial platforms

nCounter® Pro

Fully automated workflow for rapid analytics

Simple
- 24 hour sample to data, 15 minutes lab time, and true multiplexing

High Quality
- Reproducible with over 6 logs dynamic range
- Limit of detection: 15 zeptomole

Secure
- Enables 21 CFR Part 11 environment
- State of the art encryption standards

Standardized
- Pre-built panels provide standardized tool for assay development
- Purpose-driven content simplify assay development

Data Integrity

The nCounter Pro has multiple systems in place that help ensure the integrity and security of your data.

- State of the art encryption standards
- Controlled Access
- Enables a 21 CFR Part 11 Environment
- Easy Networking
- Protect User Data

Modernize With Molecular Characterization Standardized Purpose-built Panels For Assay Development

nCounter® CAR-T Characterization Panel

Allogenic-Autologus CAR-T Cell Therapies

Cell Quality Purity | Sterility Contamination | Dosing Potency | Transfection Confirmation | TCR Diversity | Toxicity

nCounter® Stem Cell Characterization Panel

ISP, Mesenchymal Tissue Specific

Pluripotency | Sterility Contamination | Differentiation Status | Lineage Specification | Stemness

nCounter® Gene Therapy Optimization Panel

Viral and Non-viral

Innate Immune Response | Adaptive Immune Response | Interferon Response | Viral Integration | Viral Secretion

GeoMx Digital Spatial Profiler & CosMx Spatial Molecular Imager

Catalyze the next revolution Using Spatial Biology

High-plex
- Whole Transcriptome (GeoMx)
- 1,000-plex RNA (CosMx)
- 96+ plex protein (GeoMx and CosMx)

Multiomic
- Simultaneous analysis of RNA and Protein with Spatial Proteogenomics

Morphologically resolved data
- Multicellular resolution: 20-200 cells (GeoMx)
- Single cell and subcellular resolution 1-10 cells (CosMx)
- Process up to 40 slides/week with GeoMx DSP

Novel Applications
- Biodistribution
- Biomarker Discovery
- Treatment Response
- Toxicity and Safety
- Transfection Efficacy
- Receptor-ligand and cell-cell interactions
- Phenotyping
- Transgene detection in cellular and subcellular context

White Glove Support Through Assay Deployment

Translational scientist with expertise across all areas of Cell and Gene Therapy

Specialized Data Analysis Team to review and interpret validation data

Assay design with customization

To learn more, visit **nanostring.com**

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