

A large iceberg floating in the ocean, with a significant portion submerged below the waterline. The top of the iceberg is jagged and white, while the submerged part is dark and textured. The background is a deep blue ocean with a clear sky.

# GREATER DEPTHS OF CONTRACT RESEARCH AT YOUR REACH

**Quanterix™**  
The Science of Precision Health

**Accelerate Your Research  
with the Accelerator Laboratory**

Custom biomarker testing and  
assay development services



## A Customized Approach

Quanterix treats every assay development and research project with individual attention, working carefully with the project sponsor to develop a detailed scope of work that achieves their research objectives most efficiently and cost-effectively. Staffed with a large team of scientists dedicated exclusively to Accelerator projects, Quanterix offers by far the greatest depth of ultra-sensitive assay development and instrument operation experience available for contract research.



- ▶ Improve your sensitivity by 1000x over standard ELISA
- ▶ Singleplex and multiplex detection of proteins and nucleic acids
- ▶ Use your proprietary antibodies/reagents or those that are commercially available
- ▶ Infrastructure allowing scalability to handle sample sets ranging from one plate to thousands of samples for large clinical studies
- ▶ Cost-effective pricing
- ▶ Robust SOPs for project/sample tracking
- ▶ CLIA and GLP-compliant through extensive partnership network
- ▶ Experienced scientific staff and multiple instruments allow quick turn-around time and the flexibility to adjust project scope as needed
- ▶ Development support with Quanterix scientists, in your lab

*Ultrasensitive Detection*  
of Proteins & Nucleic Acids

*Leverage Simoa* for PK/PD, Efficacy, Safety and Target Engagement<sup>1</sup>  
with the *Highest Possible Sensitivity.*

**Custom On-demand Assay Kit Production**

In response to customer demand, the Accelerator now partners with Quanterix manufacturing to offer custom assay kits (or specific kit components). This allows project sponsors to provide proprietary antibodies and reagents to use in the assay development and kitting process, while either running the samples at their own facility according to their established protocols or having the Accelerator run the assay. This gives customers access to kits for assays not commercially available on the Simoa platform.

**Sample Testing and Data Generation**

For customers who are interested in proof of concept before purchasing their own Simoa Instrument, or are resource-limited to run larger sample sets, the Accelerator can run samples efficiently and cost effectively. With experience running small experiments with just a few samples to large clinical studies with thousands of samples, the protocol can be tailored exactly to the sponsor's needs.

**Custom Assay Development with Optimization & Validation**

Quanterix scientists will partner with you to develop your project requirements and assay criteria, and transform commercially available or proprietary reagents into a fully validated ultrasensitive Simoa assay that delivers the highest level of performance.

**Retained Services Contracts** (Outsourced FTEs)

Service contracts for customers who need the maximum flexibility for Simoa assay development projects. The Accelerator offers Retained Services by which a set number of FTEs and instrument time is contractually committed each month for a period of 3-12 months. This allows customers to effectively extend their own research teams by leveraging Quanterix' experienced Accelerator staff and instrument access. Customers with RSCs in place benefit from the ability to iterate on assay development needs, without needing to create SOWs for each new project.

**Best Antibody Pairs**

Customers who wish to develop their own Simoa assays in their lab, but need some additional help with screening larger numbers of antibody pairs, may contract with the Accelerator to select the best antibody pairs for a Simoa homebrew singleplex or multiplex assay. We utilize a network of antibody suppliers and will screen different antibody clones to help develop the most suitable assay for the customer.

Feasibility  
Testing

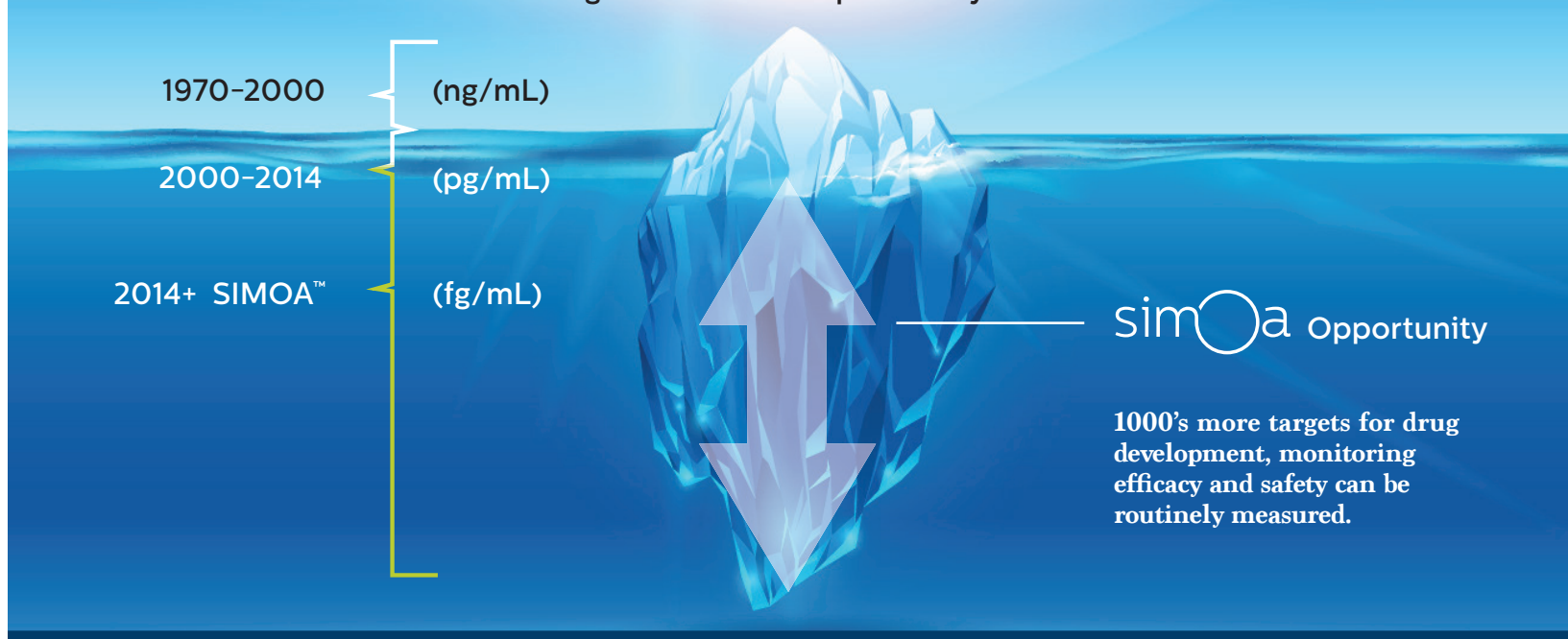
Prototype  
Development

Assay  
Optimization

Assay  
Validation

# Immunoassay Evolution

Measuring what could not previously be detected.



## Assay Development Milestones

### Assay Feasibility Testing and Prototype Development

- ▶ Identify antibody sources and reference materials
- ▶ Antibody screening (includes antibody-flip to evaluate all possible combinations)
- ▶ Select the best antibody pair for prototype development

### Assay Optimization

Following development of a prototype assay, Quanterix scientists will expand optimization strategies to further improve assay performance for sample testing. The project scope will be reviewed to define expected outcomes and timelines. Specific project activities may include:

- ▶ Further DOE to optimize bead coating, detector labeling, detector antibody and substrate concentrations
- ▶ Optimize calibrator/control, bead, detector and sample diluent formulations (salt, detergent, blockers, protein concentration, buffers, pH)
- ▶ Optimize spike recovery and serial dilution in final matrix
- ▶ Verify LOD in matrix
- ▶ Assess analyte levels using research quality reagents
- ▶ Define assay protocol

### Assay Validation

Following optimization, assay validation will be performed. The project scope will be reviewed to define expected outcomes and timelines.

#### Specific project activities may include:

- ▶ Establish calibration curves with final diluent formulations
- ▶ Determine analytical and functional sensitivity and dynamic range
- ▶ Precision (intra- and inter-assay)
- ▶ Dilutional linearity and parallelism
- ▶ Verify LOQ in matrix
- ▶ Reagent scale-up for sample testing
- ▶ Create non-GLP protocols
- ▶ Verification report that captures assay design, specifications and performance data

*Over 150 companies and research organizations have completed more than 300 projects in the Accelerator - with more than 100,000 samples tested!*



## On-site Training in Your Lab

### Development of Custom Homebrew or Prototype Assays With On-site Training

- ▶ Utilize your own proprietary reagents in combination with the Quanterix Homebrew Assay Development Kit to develop a rapid prototype Simoa assay with improved sensitivity and ease of use compared to ELISA
- ▶ In your lab and in only 4 days, establish basic assay conditions for one established antibody pair and estimate the LOD of the prototype Simoa assay
- ▶ Option to visit the Accelerator lab to develop a prototype assay together and get trained on Simoa assay development best practices

*“The Quanterix Accelerator Lab offers the chance to obtain quick, robust data for assays that would otherwise take time and resources away from other activities in the lab. We value the Accelerator Lab as more of a partner in our quest to develop customized and sensitive assays for project progression.”*

- Jim Messamore | Zoetis

### On-Site Customer Assay Development Training

DAY 1: Intro and conjugation	Introduction to Simoa technology and the HD-1 Analyzer
	Conjugation of beads with capture antibody
	Biotinylation of detector antibody
DAY 2: Initial runs of prototype assay	Evaluation of initial conditions for LOD determination
	Selection of optimal bead coating and biotinylation levels
	Optimize detector antibody and substrate concentrations
DAY 3: Assess matrix and background	Final rounds of assay optimization (e.g. 2-step vs. 3-step, buffers etc.)
	Spike recovery and dilutional linearity
DAY 4: Sample testing	Test a plate of individual samples using optimized prototype conditions

Included in Training: Simoa Homebrew Assay Training Kit (Product code: ACC1001); Simoa Consumables Kit (Product code: 101351)

# Learn More About Accelerating Your Biomarker Research

[www.quanterix.com](http://www.quanterix.com) or email: [info@quanterix.com](mailto:info@quanterix.com).

## About Quanterix

Quanterix is a company that is digitizing biomarker analysis with the goal of advancing the science of precision health. The company's ultra-sensitive detection solution, Simoa, has the potential to change the way in which healthcare is provided today by giving researchers the ability to closely examine the role of biomarkers in the continuum of health to disease. Quanterix' technology is designed to enable much earlier disease detection, better prognosis and precise treatment methods to improve the quality of life and longevity of the population for generations to come. The technology is currently being used for research applications in several therapeutic areas, including oncology, neurology, cardiology, inflammation and infectious disease. The company was established in 2007 and is located in Lexington, Massachusetts.

### *Join the 18 of top 20 Global BioPharma Companies Who Use the Quanterix Accelerator*



1. Yeung, D., et al.(2016). Evaluation of highly sensitive immunoassay technologies for quantitative measurements of sub-pg/mL levels of cytokines in human serum. Journal of Immunological Methods, 437, 53-63. doi:10.1016/j.jim.2016.08.003

**Quanterix Corporation**  
113 Hartwell Avenue, Lexington, MA 02421  
[quanterix.com](http://quanterix.com)

**Quanterix™**  
The Science of Precision Health

©2017 Quanterix, Inc. Simoa™ is a registered trademark of Quanterix, Inc.  
For research use only. Not for use in diagnostic procedures.