



Translational Science and Innovation Laboratory (TSAIL)

Translational biomarker solutions to accelerate the adoption of assays into clinical trials through new technology evaluation and early biomarker discovery

In today's evolving, dynamic clinical development environment, central laboratories must adapt to meet the growing demand for early biomarker evaluation before advancement into clinical trials. Bringing biomarkers or novel technologies into clinical research is becoming increasingly complex, which often calls for exploratory biomarker research and new technology evaluation outside the regulatory confines of clinical trials. At Q² Solutions, our dedicated, state-of-the-art Translational Science and Innovation Laboratory (TSAIL) is designed to address these challenges, provide the agility and breadth of translational science capabilities and expertise required to bridge the gap

between preclinical and early clinical drug development, and introduce new biomarker-assays into clinical study. This approach ensures that the most effective biomarkers and associated technologies are validated earlier and deployed rapidly to accelerate the development of therapeutics.

TSAIL focuses on biomarker discovery activities, exploratory clinical sample testing and new technology evaluation. The scientific team includes experts in **anatomic pathology, flow cytometry, genomics, bioinformatics**, and **immunoassays** including cell-based assay.

Q² Solutions Translational Science and Innovation Laboratory

The center of innovation with access to a broad spectrum of scientific disciplines and expertise.

Anatomic Pathology

- Multiplexing
- Tissue Micro-Arrays
- Exploratory Staining
- AI/ML driven/assisted pathology
- Digital Spatial Profiling

Soluble Biomarker Protein

- Immunoassay
- ELISpot

Bioinformatics – Data Analytics / AI & ML

- Integration of holistic biomarker data
- Identification of novel biomarkers



TSAIL
Accelerating
the drug
development
process



Flow Cytometry

- Customer Assay feasibility/ optimization
- Exploratory Assay
- Cell Sorting
- Data Analytics

Genetics/Genomics

- Single Cell NGS
- Neoantigen Discovery
- Microbiome

TSAIL's custom-designed, multidisciplinary space melds industry-leading expertise with numerous cutting-edge technology platforms to support all aspects of biomarker development and delivery. TSAIL supports fit-for-purpose validation by enabling customers to access a broad range of services, including tailored biomarker assay development, bioinformatics, data analytics, digital innovations, and the capability to evaluate novel technologies.

Working with TSAIL provides several benefits including:

- Access to pre-clinical research technologies and exploratory data to guide clinical trial design;
- Opportunities for team-building and collaboration with Q² Solutions' subject-matter experts to enhance clinical trial success;
- Deployment and outsourcing of biomarker R&D projects that leverage the Q² Solutions ecosystem;
- Access to established in vitro diagnostic (IVD) and companion diagnostic (CDx) manufacturers in the Q² Solutions network/portfolio;
- Integration of holistic artificial intelligence/machine learning technologies.

TSAIL's translational scientists can help you to overcome many of the challenges associated with moving biomarkers and technologies from discovery into clinical trials.

Contact us

Toll free: +1 855.277.9929

Direct: +1 919.998.7000

International: +44 (0) 1506 814000

Q² Solutions: +1 919.405.2248

Website: www.Q2LabSolutions.com

Access to a diverse portfolio of technology platforms

ANATOMIC PATHOLOGY

- Leica Bond III
- Ventana Benchmark
- Olympus Stereo Microscope (SZX7)
- Multi-Headed (5-8) Brightfield Microscope (BX51)
- Fluorescent Microscope/Brightfield Microscope
- Abbott Bioview (FISH)
- Agilent Dako Omnis
- Digital Pathology Scanner Imaging
- NanoString Technologies GeoMx DSP

IMMUNOASSAY

- MesoScaleDiscovery (MSD)
- ELISA
- Luminex
- Quanterix

GENOMICS

- 10x Genomics
- Agilent TapeStation
- Bio-Rad QX200 AutoDG ddPCR System
- Fluidigm BioMark HD
- HTG EdgeSeq
- Illumina MiSeq, MiSeqDx, HiSeq 2500, NextSeq 500/550, NextSeqDx, NovaSeq6000
- NanoString nCounter
- Qiagen QIAsymphony
- Thermo Fisher 7500 Fast, 7500 FastDx, Genexus, ViiA7, Quant Studio
- Thermo Fisher Ion Chef, OneTouch Dx, PGM Dx, S5 XL
- Thermo Fisher NanoDrop ND-8000, Qubit
- Thermo Fisher SeqStudio

CELL-BASED IMMUNOLOGY

- Cytex Aurora 64 parameter full-spectrum cytometer (FSCM)
- Cytex Aurora full-spectrum cell sorter
- CTL Immunospot S6 Ultimate Analyzer (ELISpot reader)

