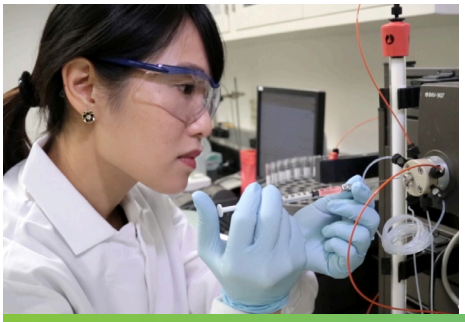

FRED HUTCH
CURES START HERE®

SHARED RESOURCES

Immune Monitoring

Fred Hutch's Shared Resources are catalysts for lifesaving discoveries. This uniquely centralized program of 15 specialized core facilities and scientific services drives advances by integrating dedicated experts and cutting-edge technologies across the entire research pipeline, from basic science to clinical trials.

LEARN MORE

Jianhong Cao, Ph.D.
Director
206.667.6455
jcao@fredhutch.org

The 1,700ft^2 Immune Monitoring core facility provides a broad range of services and expertise for precisely evaluating cellular immunologic processes and responses. Staff members use molecular, cellular and biochemical methods to analyze phenotypical and functional aspects of immune cells.

The core facility provides all necessary instrumentation for processing and analyzing laboratory and clinical samples such as DNA, cells, supernatant, blood, serum or tissue. It also provides custom-made reagents, molecular and cellular assays, assay development and instrumentation support, research consulting services, and technical training.

Many of the core facility's clients are developing T-cell therapies for a variety of solid and liquid cancers. For these preclinical and clinical projects, the team is creating high-grade tetramers for antigen-specific T-cell sorting and monitoring patient samples for T-cell persistence and cytokine levels. Other projects involve hematopoietic stem cell transplantation, vaccine development, infectious diseases and more.

Services

- Class I peptide-MHC tetramer production; multiple fluorochrome conjugates and MHC alleles for human, mouse and macaque
- Cytokine analysis
- Molecular monitoring by real-time PCR/qPCR analysis
- Monitoring and phenotyping of immune cells by flow cytometry
- T-cell receptor (TCR) spectratyping
- TCR excision circles (TREC) assays
- Gibson DNA assembly and cloning

Key Equipment

- Applied Biosystems StepOnePlus real-time PCR system
- Roche LightCycler 480 Instrument II real-time PCR system
- SGI-DNA BioXp DNA printer system
- Luminex 200 analyzer
- Packard TopCount microplate scintillation and luminescence counter
- ACEA Biosciences xCELLigence real-time cell analysis system
- BioTek Synergy H4 Hybrid microplate reader
- Molecular Devices Vmax 96-cell microplate reader
- Fast protein liquid chromatography (FPLC) system
- Cell harvester
- ELISPOT reader
- Microplate luminometer