



Medical Director

Joseph R Leventhal MD PhD
Fowler McCormick Prof. of Surgery
Director, Kidney Transplant
Program



Director

James M Mathew PhD
Professor of Surgery and
Microbiology-Immunology

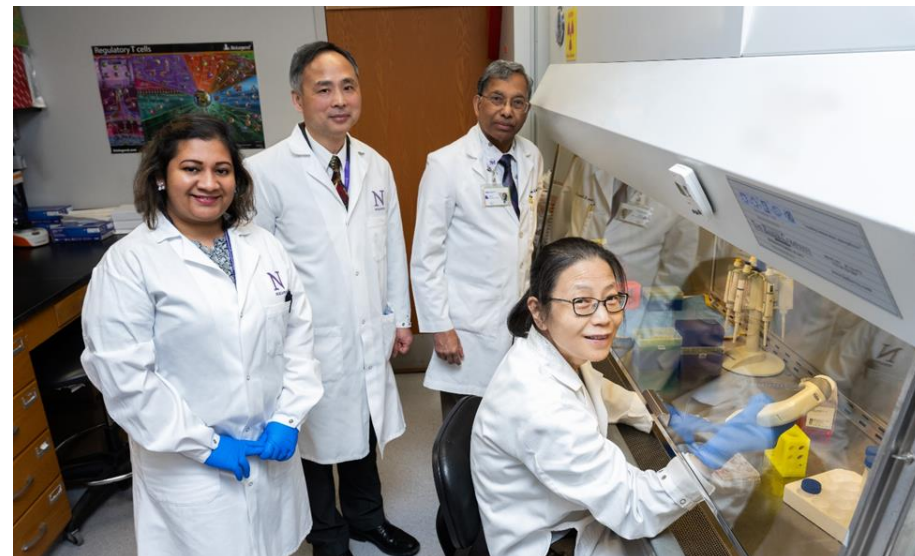


Co-Director

Hong Xu MD
Associate Professor of Surgery

Immune Monitoring Core
Comprehensive Transplant Center
Feinberg School of Medicine
Northwestern University
320 East Superior Street, Tarry 11-710
Chicago, IL 60611

<http://www.feinberg.northwestern.edu/sites/transplant/research/research-cores/immune-core.htm>



Immune Monitoring Core

Comprehensive Transplant Center

Feinberg School of Medicine
Northwestern University
676 N. St. Clair St., Suite 1900
Chicago, IL 60611
Tel: 312-695-3555
Fax: 866-485-9212
E-Mail: CTC@northwestern.edu



Comprehensive
Transplant Center

Mission

The mission of the Immune Monitoring Core is to provide translational mechanistic studies in human solid organ and cellular transplantations.

About the Immune Monitoring Core

The Immune Monitoring Core is located at 300 E. Superior Street, Suite 1100. It is a component of the Comprehensive Transplant Center (CTC) under the direction of Drs. Joseph Leventhal and James Mathew.

The Immune Monitoring Core is dedicated to assisting investigators with a central resource for human immune monitoring needs for translational and clinical transplantation research projects. It provides a valuable and unique research opportunity for translational mechanistic studies in organ and stem cell transplantation.

The core offers a wide variety of immune monitoring services, supported by a robust and specialized team of lab personnel and faculty directors. The core provides the necessary expertise in the increasingly specialized investigative paths within immune monitoring.

Personnel include a specialized team with directors in Renal, Liver, Pancreas, skin, artery, and Islet transplantation.



Services

The Immune Monitoring Core currently provides the following services to the investigators of the CTC as well as the other investigators in Northwestern University and beyond on a collaborative basis. Investigators will be responsible for the costs incurred for their projects and prior animal protocol approval.

- Cell Cultures; Biopsy cultures
- MLR and proliferation assays by ³H-Thymidine incorporation and/or CFSE dilution
- Treg-MLR that assays the ability of modulatory agents to induce the generation of new Tregs in culture
- AlloSEQ Analysis - Flow sorting of MLR responding and proliferating cells (for subsequent TCR and BCR clonotypic analyses by Adaptive Biotechnologies)
- Cells Mediated Lympholysis (CML), Micro-CML and cytotoxicity assays using ⁵¹Chromium release
- Limiting Dilution Analysis (LDA) for CTL and Helper Precursors (CTLp and HTLp)
- 14 Color Flow analyses for cell subsets and intracellular molecules such as FoxP3, IFN- γ , etc.
- Multicolor RNAscope – an RNA ISH technique that allows for the detection of low quantities of RNA in cellular and tissue samples.
- Cytokine Assays in cell subsets (Flow) and culture supernatants (Luminex)
- ELISPOT Assays for IFN- γ , Granzyme-B and other cytokines
- Humanized mouse assays for stem cell and immune subset mediated tolerance, including the use of NSG mouse-human skin graft model.
- Ex vivo generation and expansion of polyclonal Treg and antigen-specific Treg.
- The mouse models for induction of transplant tolerance, including bone marrow and skin transplantation.
- Any other technology as needed for specialized projects.

Getting Started

To discuss starting a project using the services of the Immune Monitoring Core of the Comprehensive Transplant Center, please contact:

James M Mathew, PhD
james-mathew@northwestern.edu

Hong Xu, MD
hong.xu@northwestern.edu