



Medical Director

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Fowler McCormick Prof. of Surgery
Director, Kidney Transplant
Program

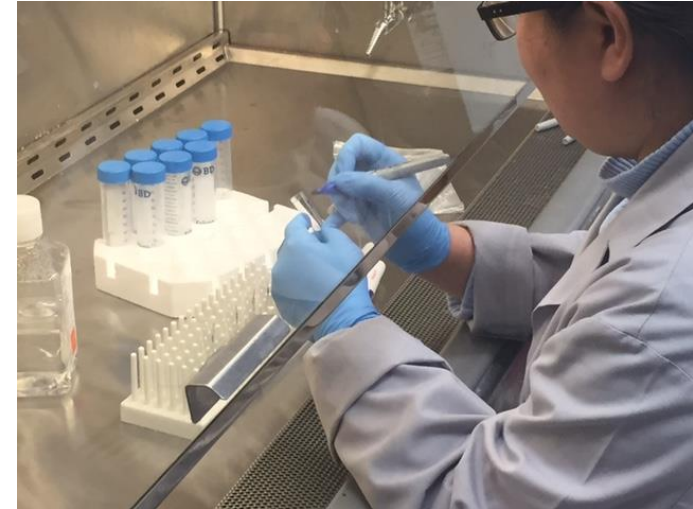
Immune Monitoring Core
Comprehensive Transplant Center
Feinberg School of Medicine
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<http://www.feinberg.northwestern.edu/sites/transplant/research/research-cores/immune-core.html>



Director

James M Mathew PhD
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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 associate directors in Renal, Liver, Pancreas, Islet transplantation as well as composite tissue allografts.



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. 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 $^{51}\text{Chromium}$ release
- Limiting Dilution Analysis (LDA) for CTL and Helper Precursors (CTLp and HTLp)
- Colony forming assays
- 5 & 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
- Transvivo Delayed Type Hypersensitivity Assay (TV-DTH)
- Analysis of HLA and Donor Specific B cells (in collaboration with FCVRRRI – Translational Medicine)
- Mycoplasma testing
- Humanized mouse assays for stem cell and immune subset mediated tolerance, including use of NSG mouse human skin graft model (with the Microsurgery Core)”

Getting Started

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

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