

**Cell Therapy & Immune Monitoring (CTIM) (Co-directors: Bryon Johnson, PhD & Tyce Kearl, MD, PhD).** The CTIM Shared Resource is an integral part of the **Blood and Marrow Transplantation (BMT) & Cell Therapy Lab (CTL)**, which provides services for MCW, Froedtert Hospital, Children's Wisconsin, and the Blood Research Institute (BRI) of Versiti/Blood Center of Wisconsin. The lab is CAP accredited, CLIA certified, and is accredited by the Foundation for the Accreditation of Cellular Therapy. The BMT & CTL focuses on 3 areas: (a) Optimizing the processing and storage of hematopoietic progenitor cell products to improve outcomes of blood and marrow transplantation; (b) Manufacturing novel cell therapies to combat human cancer and non-malignant diseases of the hematopoietic system; and (c) Processing, storing and analyzing preclinical samples and biospecimens from patients on cell therapy clinical trials.

The goal of the CTIM / CPL Shared Resource is to broaden access of CTL resources across the MCW campus.

Key equipment includes:

- Miltenyi CliniMACS Prodigy system for in-house production of novel CAR-T cell and immunotherapy products,
- Berkeley Lights Lightning Optofluidic system for groundbreaking single-cell studies. The system performs simultaneous assessment of single-cell function and phenotype with the capacity to re-isolate cells of interest for additional studies such as gene expression analysis,
- Luminex and IsoPlexis systems for bulk and single-cell cytokine analysis,
- xCelligence system for real-time cell cytotoxicity assays, and
- Assays of cell proliferation, ELISA, PCR (droplet digital system and standard PCR) and up to 8-color flow cytometry.