Moffitt CPF Staff and Facility
T Regulatory (Treg) Cells for GVHD

Generating Minor HLA Specific T Regulatory Cells for Graft versus Host Disease

- Dr. Anasetti’s laboratory is interested in allogeneic graft manipulation designed to immunize donor Tregs to host minor histocompatibility antigens ex vivo in order to abrogate GVHD post allogeneic stem cell transplantation.

CPF Services Utilized:
- large-scale manufacture of DC;
- selection and expansion of Treg
- development of flow cytometry potency assay;
- regulatory approval support (CMC)
Dendritic Cell (DC) Vaccines

Generating Dendritic Cell Vaccines for Multiple Myeloma

- Dr. Locke's laboratory is interested in identifying, isolating, expanding, and characterizing tumor antigen-associated T lymphocytes and dendritic cell vaccines for use in multiple myeloma patients to treat minimal residual disease and relapse.

CPF Services Utilized:
- characterization of adenoviral vector;
- manufacture of gene-modified DC;
- development of flow cytometry potency assay;
- regulatory approval support (RAC, CMC)

Figure 1. Full length survivin protein vaccine expands survivin specific CD4+ cells even in patients with a low survivin reactive precursor frequency.

Tumor Infiltrating Lymphocytes (TIL)

Advancing Tumor Infiltrating Lymphocyte Therapy for Solid Tumors

- Dr. Sarnaik’s laboratory investigates the use of TIL Therapy to overcome tumor-mediated T cell suppression for melanoma

CPF Services Utilized:
- large-scale manufacture of expanded TIL;
- validation of new closed-system manufacturing techniques;
- development of screening and potency assays;
- regulatory approval support (CMC)
Chimeric Antigen Receptor (CAR) T Cells

Engineering Chimeric Antigen Receptor T Cells for Hematologic Malignancies

- Dr. Davila’s laboratory is interested in developing novel constructs to enhance the specificity and persistence of CAR-T cell therapies

CPF Services Utilized:
- characterization and titration of gamma retroviral vector;
- validation of T cell transduction and culture methods
- MCB of Artificial Antigen Presenting Cell (AAPC)
- validation of AAPC in T lymphocyte expansion

Figure 1. Evolution of CAR T Cell design