



## PACT Products / Capabilities\*

### Progenitor Cells

- c-kit<sup>+</sup> cells (cardiac/renal)
- Endothelial cells
- Hematopoietic stem cells (HSC)
  - Aldehyde dehydrogenase-bright cells
  - Bone Marrow (BM)
  - Peripheral Blood (PB)
  - Umbilical placental/cord blood (UCB)
- Hepatic stem cells
- Human embryonic stem cells (hESC, *NIH-approved cell lines*)
- Induced pluripotent stem cells (iPSC)
- Mesenchymal stem cells (MSC) (BM, Umbilical cord blood/tissue)
- Neural stem cells
- Skeletal myoblasts
- T cells - UCB-derived

### Antigen Presenting Cells / Dendritic Cells / Tumor Vaccines

- Antigen-presenting cells
  - Dendritic cells/Monocytes
  - K562 – genetically modified
  - Pepmix-pulsed activated T cells
  - Dendritic cells
  - Adenovirally transduced
  - Apoptotic tumor cell pulsed
  - Transfected
  - Tumor lysate pulsed
  - Tumor-dendritic cell hybrids
- Large multivalent immunogen (LMI) vaccine (allogeneic)
  - Breast adenocarcinoma
  - Melanoma

### Lymphocytes

- EBV-transformed B cell lines (LCLs)
- PB-derived
  - Activated NK cells
  - CD4<sup>+</sup>/CD25<sup>+</sup> T regulatory cells
  - TGFβ-induced T regulatory cells
- T cells - virus specific
  - Adenovirus
  - BK virus
  - Cytomegalovirus
  - EBV
  - EBV-LMP-directed
  - HIV
  - HHV-6
  - Vaccinia
  - Varicella zoster (VZV)
- Thymidine kinase (suicide gene)-transduced T cells
- Tumor-infiltrating lymphocytes (TILs)
- UCB-derived CD4<sup>+</sup>/CD25<sup>+</sup> T regulatory cells



---

### **Genetically Modified Cells**

---

- Activated T cells
- CAR-T cells / CAR-VSTs
- Cytotoxic T Lymphocytes (TGF $\beta$ , CAR)
- Dendritic cells
- Fibroblasts
- HSC
- Neural stem cells
- Tumor cells/vaccines

---

### **Master / Working Cell Banks**

---

- B95-8 EBV
- Fibroblasts
- hESC (*NIH-approved cell lines*)
- iPSC
- MSC
- Neural stem cells
- NK cell lines

---

### **Services**

---

- Alloreactive T cell depleted (immunotoxin)
- Aseptic filling
- Biochemical, ELISA, Western blot analysis
- Cell culture isolation, expansion, and cryopreservation technologies
- Cell Depletion / Cell Enrichment (BM/PB/UCB)
  - CD3/CD19 depletion
  - CD14 selection
  - CD34 selection
  - CD56 selection
  - TCR-alpha/beta depletion
- Cell manufacturing for large animal models
- Counterflow elutriation
- Cytokine capture technology
- Estimation of product telomere length and activities
- Extraction of biomarkers and gene expression
- Immune monitoring
- Immuno histofluorescence
- Pancreatic islet cell production
- Plasmid production
- Potency assay development
- Tumor digestion

---

\*List is not inclusive

11/2017

PACT Cell Processing Facilities

**Center for Cell and Gene Therapy, Baylor College of Medicine**

**Center for Biomedicine and Genetics, City of Hope**

**Interdisciplinary Stem Cell Institute Cellular Manufacturing Program,  
University of Miami,  
Miller School of Medicine**

**University of Minnesota, Molecular and Cellular Therapeutics**

**Moffitt Cancer Center**

**The Emmes Corporation – Coordinating Center**