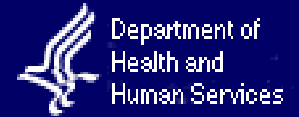




U.S. Food and Drug Administration



CENTER FOR BIOLOGICS EVALUATION AND RESEARCH

# FDA Updates on Regulatory Issues Related to Cancer Immunotherapy

Society for Immunotherapy of Cancer

General Session (308): “Cancer Immunotherapy  
Guidelines (CIG)

Raj K. Puri, M.D., Ph.D.

Director, DCGT

Office of Cellular, Tissue and Gene  
Therapies, FDA, CBER

Date: October 26, 2012

Time: 5:30 PM to 5:45 PM

Location: Bethesda, MD



# FDA Regulation of Oncology Products

- Office of Hematology and Oncology Drug Products (OHOP), CDER
  - Drugs (small molecules)
  - Biologics, including Monoclonal Antibodies, Therapeutic Proteins, Cytokines
- Office of Cellular, Tissue and Gene Therapy, (OCTGT) CBER
  - Cell therapies
  - Gene Therapies
  - Oncolytic viruses
  - Therapeutic vaccines and immunotherapies
- Center for Device Radiological Health (CDRH):
  - Devices
    - Companion Diagnostics
    - Delivery devices



# CDER Office of Cellular, Tissue, and Gene Therapies (OCTGT)

## **Office of the Director**

**Celia M. Witten, Ph.D., M.D., Director**

**Stephanie Simek, Ph.D., Deputy Director**

**Suzanne Epstein, Ph.D., Associate Director of Research**

**Richard McFarland, M.D., Ph.D., Associate Director of Policy**

## **Division of Cellular and Gene Therapies**

**Raj Puri, M.D., Ph.D., Director**

**Kimberly Benton, Ph.D., Deputy Director**

## **Division of Human Tissues**

**Ellen Lazarus, M.D., Director**

## **Division of Clinical Evaluation and Pharmacology/Toxicology**

**Wilson Bryan, M.D., Director**



# CDER Office of Hematology and Oncology Products (OHOP)

## **Office of the Director**

**Richard Pazdur, M.D. Director**

## **Division of Hematology Oncology Toxicology**

**John Leighton, Ph.D., Director**

## **Division of Oncology Products 1**

**Robert Justice, M.D., M.S., Director**

## **Division of Oncology Products 2**

**Patricia Keegan, M.D, M.D., Director**

## **Division of Hematology Products**

**Ann Farrell, M.D., M.D., Director**



# Oncology Product Approvals by OCTGT

- Provenge (sipuleucel-T) – Dendreon
  - ARPC
- HEMACORD (HPC, Cord Blood) – NY Blood Center
  - HPC, Cord Blood is an allogeneic cord blood hematopoietic progenitor cell therapy indicated for use in unrelated donor hematopoietic progenitor cell transplantation procedures in conjunction with an appropriate preparative regimen for hematopoietic and immunologic reconstitution in patients with disorders affecting the hematopoietic system that are inherited, acquired, or result from myeloablative treatment.
  - <http://www.fda.gov/BiologicsBloodVaccines/CellularGeneTherapyProducts/ApprovedProducts/ucm282057.htm>
- HPC, Cord Blood – Clinimmune labs, University of Colorado Cord Blood Bank
- DUCORD (HPC, Cord Blood) – Duke University



# Recent Guidance Documents

- Guidance for Industry: Clinical Considerations for Therapeutic Cancer Vaccines

<http://www.fda.gov/downloads/BiologicsBloodVaccines/GuidanceComplianceRegulatoryInformation/Guidances/Vaccines/UCM182826.pdf>

- Draft In Vitro Companion Diagnostic guidance

<http://www.fda.gov/MedicalDevices/DeviceRegulationandGuidance/GuidanceDocuments/ucm262292.htm>

- Draft Guidance for Industry: Codevelopment of Two or More Unmarketed Investigational Drugs for Use in Combination

<http://www.fda.gov/medicaldevices/deviceregulationandguidance/guidancedocuments/ucm262292.htm>



# FDA guidance: Clinical Considerations for Therapeutic Cancer Vaccines

- General considerations
  - Patient Population
  - Immune response
- Early phase study considerations
  - Starting Dose and Schedule
  - Dose escalation
  - Randomized phase 2 vs. single arm study designs
- Later phase study considerations
  - Endpoints for licensure
  - Phase 3 study designs
  - Control arm issues
  - Combination therapies



# Draft Guidance on In Vitro Companion Diagnostic Devices

- A companion diagnostic device is a medical device that identifies/determines a condition of use for a therapeutic product and is important to ensure the safe and effective use of that product.
  - *If the safe and effective use of the therapeutic product requires a particular test result, that test is a companion diagnostic*
    - *(e.g., specific antigen or target for eligibility, randomization based on marker etc.)*
- If use of a companion diagnostic device is essential for the safe and effective use of a therapeutic product, the diagnostic device and therapeutic product should be approved or cleared contemporaneously by FDA for the use indicated in the therapeutic product labeling.





# Draft Guidance for Industry: Codevelopment of Two or More Unmarketed Investigational Drugs for Use in Combination (CDER)

- *Codevelopment* refers to the concurrent development of two or more drug products with the intent that the products be used in combination to treat a disease or condition.
- It is not intended to apply to development of fixed-dose combinations of already marketed drugs or to development of a single new investigational drug to be used in combination with an approved drug or drugs.
- The guidance is also not intended to apply to vaccines, gene or cellular therapies, blood products, or medical devices



# Useful OCTGT Tools

- References for the Regulatory Process for the Office of Cellular, Tissue, and Gene Therapies (OCTGT)  
<http://www.fda.gov/BiologicsBloodVaccines/GuidanceComplianceRegulatoryInformation/OtherRecommendationsforManufacturers/ucm094338.htm>
- OCTGT Learn Webinar Series:  
<http://www.fda.gov/BiologicsBloodVaccines/NewsEvents/ucm232821.htm>
- FDA Clinical Investigator Training course (Nov 13-15 2012):  
<https://www.ctti-clinicaltrials.org/resources>



# OCTGT Learn Webinar Series 1

<http://www.fda.gov/BiologicsBloodVaccines/NewsEvents/ucm232821.htm>

- Introduction and Scope of OCTGT
- IND Basics in OCTGT
- Sponsor Meetings with OCTGT
- “361” Human Cells, Tissues, & Cellular and Tissue Based Products
- The Chemistry, Manufacturing and Controls (CMC) Section of a Gene Therapy IND
- Advanced Topics: Successful Development of Quality Cell and Gene Therapy Products
- Cellular Therapy Products
- Preclinical Considerations for Products Regulated in OCTGT



# OCTGT Learn Webinar Series 2

<http://www.fda.gov/BiologicsBloodVaccines/NewsEvents/ucm232821.htm?source=govdelivery>

- Regulatory Obligations for Investigator-Sponsored Research
- Early-Phase Trials of Cellular and Gene Therapies
- Pediatric Clinical Trials
- The Target Product Profile
- Fast Track for Products Regulated in OCTGT
- IND Safety Reporting
- Data Monitoring Committees
- Endpoint Assessment and Adjudication Committees



# Interaction with EMA and HC

- ATMP Cluster meeting every month
  - Increased dialogue between Agencies from early stages of development
  - Exchange views, share expertise
  - Discuss applications, manufacturing, product development, pharm/tox topics and end points
  - Optimise and facilitate global development, meeting both agencies requirements



# Interaction with EU

## FDA/EMA Parallel scientific advice (PSA)

- Sharing of information and perspectives  
Harmonization/convergence could be a beneficial outcome
- Focus: Oncology, Vaccines, Orphan Drugs, Paediatrics, Nanotechnologies, Advanced Therapies, Pharmacogenomics and Blood products.
- Focus on issues for which no guidance exists or where FDA-EMA guidance differs significantly.
- Voluntary procedure, at request of sponsor
- Available to sponsors of a future IND, NDA, BLA & MAA (+ supplements & variations)
- Questions on product development put to both FDA and EMA
- Discussions between FDA-EMA, and joint with sponsor
- Discussions at PSA meetings: not final views
- Each Agency will issue separate responses to sponsor's questions in line with usual procedures



# OCTGT Contact Information

**Raj K. Puri, M.D., Ph.D., Director**  
**Division of Cellular and Gene Therapies**  
Office of Cellular Tissue and Gene Therapies  
CBER/FDA  
Raj.puri@fda.hhs.gov

## **Regulatory Questions:**

Contact the Regulatory Management Staff in OCTGT at  
[CBEROCTGTRMS@fda.hhs.gov](mailto:CBEROCTGTRMS@fda.hhs.gov)  
or Lori.Tull@fda.hhs.gov  
or by calling (301) 827-6536

