

Center for Biologics Evaluation and Research

Innovative Technology Advancing Public Health

Alliance for a Stronger FDA

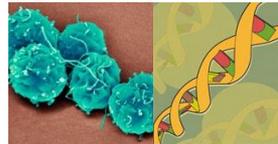
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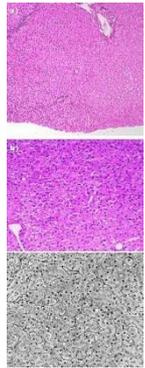


CBER Regulated Complex Products

Cell & Gene Therapies



Blood, Blood Components and Derivatives



Tissues



Xenotransplantation Products

Vaccines: Preventive & Therapeutic



Related Devices



Allergenic Products

CBER Regulatory Issues

- **Complex** products
 - Source materials may be living cells, organisms, or tissues
 - Inherent risks from infectious agents
 - Complex manufacturing processes, facilities, & products
 - Novel, rapidly evolving product classes require early scientific and regulatory interaction and guidance
 - Challenges associated with using new technologies in the development and licensure of vaccines to prevent infectious diseases
- **Difficult** products to characterize
- **Multiple** mechanisms of action that are not always predictable

CBER's Mission and Vision

Mission

To ensure the safety, purity, potency, and effectiveness of biological products including vaccines, allergenics, blood and blood products, and cells, tissues, and gene therapies for the prevention, diagnosis, and treatment of human diseases, conditions, or injury. Through our mission, we also help to protect the public against the threats of emerging infectious diseases and bioterrorism.

Vision

CBER uses sound science and regulatory expertise to:

- Protect and improve public and individual health in the U.S. and, where feasible, globally
- Facilitate the development and approval of, and access to safe and effective products and promising new technologies
- Strengthen CBER as a preeminent regulatory organization for biological products

CBER Strategic Plan Goals

- Increase the nation's preparedness to address threats as a result of terrorism, pandemic influenza and emerging infectious diseases
- Improve global public health through international collaboration including research and information sharing
- Enhance the ability of advances in science & technology to facilitate the development of safe and effective biological products
- Ensure the safety of biological products
- Advance regulatory science and research
- Manage for organizational excellence and accountability

The CBER Strategic Plan FY 2012 - 2016 is located at:

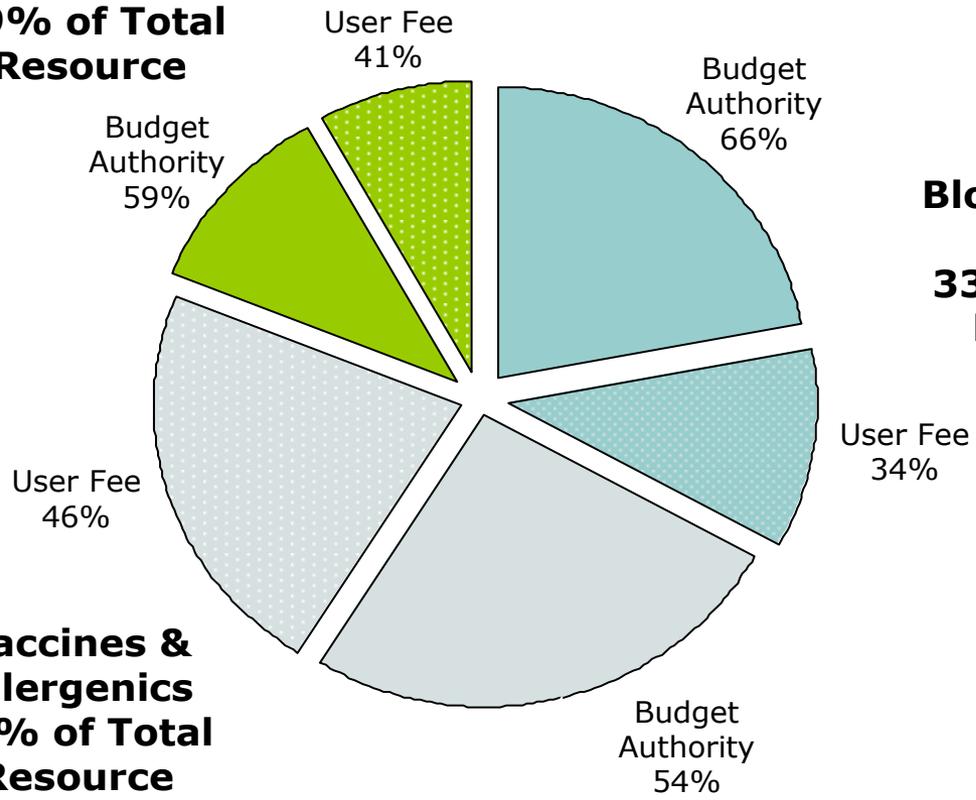
<http://www.fda.gov/downloads/aboutfda/centersoffices/cber/ucm266867.pdf>

CBER Program Resources FY 2013 Enacted

**Cell, Gene
Therapies &
Tissues
19% of Total
Resource**

**Blood & Blood
Products
33% of Total
Resource**

**Vaccines &
Allergenic
48% of Total
Resource**



FY 2014 President's Budget Request Summary of Change ^{1/}

Budget Authority

Advancing Medical Countermeasures: \$252,000

CBER Portion of FDA-wide Pay Increase: \$755,000

Base Adjustment: -\$2,143,000

User Fees

PDUFA, MDUFA and BsUFA received inflationary increases.

GDUFA (First year of Resources for CBER) +\$774,000

^{1/} From the FY 2012 Enacted Level

Recent Accomplishments

FDASIA – Selected Provisions

Reauthorization of PDUFA V (Title I) and MDUFA III (Title II)

Implementation of GDUFA (Title III) & BsUFA (Title IV)

Title V – Reauthorizes PREA and BPCA

e.g. – provided guidance on content of and process for submitting pediatric study plans

Title VII – Global drug supply chain

- Issued proposed rule to extend the agency's administrative detention authority to include drugs, in addition to the authority that is already in place for foods and devices
- Issued a draft guidance defining conduct the agency considers delaying, denying, limiting or refusing inspection, resulting in a drug being deemed adulterated
- Held a public meeting in July, regarding how the agency might implement other parts of FDASIA to protect the drug supply chain

Title IX – Drug Approval and Patient Access, Sections 901 and 902

- Published draft guidance “Expedited Programs for Serious Conditions - - Drugs and Biologics” – covers fast track, accelerated approval, and breakthrough designation, to help enhance accelerated patient access to new medical treatments

Title X – Drug Shortage

e.g. – FDA working on proposed rule and strategic plan

Recent Accomplishments

Surveillance

- Under the Mini-Sentinel's PRISM initiative to improve vaccine safety surveillance, CBER has been conducting post-market safety signal evaluations of the Rotavirus and Human Papillomavirus vaccines. This is the largest electronic real-time active surveillance system for vaccine safety in the U.S.
- CBER is collaborating with CMS and the CDC to compare the effectiveness of high-dose versus standard dose vaccines in preventing influenza among elderly populations in the U.S.
- CBER, in collaboration with BARDA, NIH, and the CDC, is developing strategies for how to best measure product-specific influenza vaccine effectiveness during a pandemic.

Tissues, Cell and Gene Therapies

- In May 2013 approved HPC, Cord Blood and Allocord, bringing to five the number of licensed cord blood products available to treat patients with certain disorders affecting the hematopoietic system.
- Issued draft guidances: "Considerations for the Design of Early-Phase Clinical Trials of Cellular and Gene Therapy Products" (July 2013), which represents the first comprehensive set of recommendations to assist sponsors and investigators on the design of early-phase clinical trials of cellular therapy and gene therapy products; and Biologics License Applications and Investigational New Drug Applications for Minimally Manipulated, Unrelated Allogeneic Placental/Umbilical Cord Blood Intended for Hematopoietic and Immunologic Reconstitution in Patients with Disorders Affecting the Hematopoietic System (June 2013).

Recent Accomplishments

Vaccines

- Approved five seasonal influenza vaccines in 2012 and 2013. The approvals include three quadrivalent vaccines, which increase the likelihood of adequate protection against circulating influenza B strains, and the first two non-egg technologies offering the potential for faster start-up of the vaccine manufacturing process.
- Continued to optimize the vaccine review and licensing process to help approve or expand indications for many important safe and effective vaccines in recent years such as the Prevnar 13, Zostavax, Ixiaro, Menhibrix, Adenovirus Type 4 and Type 7 vaccine, Menactra, and Menveo.
- November 2012 Advisory Committee met to discuss and make recommendations on the safety and immunogenicity of Q-Pan H5N1, a monovalent adjuvanted pandemic influenza vaccine.
- Published research in a peer reviewed publication about baboons providing an excellent model of clinical pertussis. This model allows researchers to investigate how Bordetella pertussis bacteria cause disease, spread in a population, and how immunity develops. This may help inform development of new pertussis vaccines.
- Obtained redesignation in February 2012 as a WHO Collaborating Center for Biological Standardization and served as a reference National Regulatory Authority for eight prequalified vaccines.

Recent Accomplishments

Blood and Blood Products

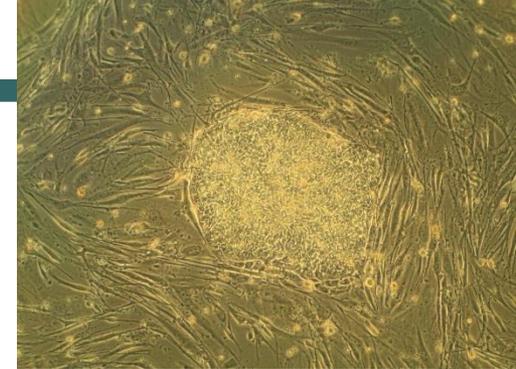
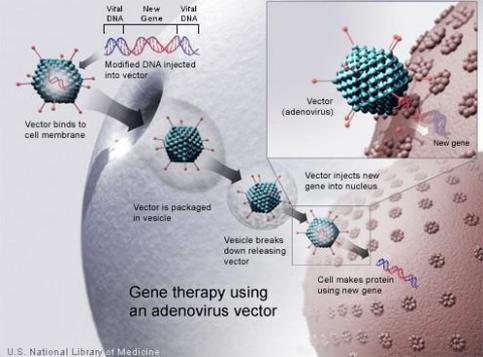
- Issued final guidances, including: “Pre-Storage Leukocyte Reduction of Whole Blood and Blood Components Intended for Transfusion to streamlines the licensing procedure for leukocyte reduced blood components”; “Use of Nucleic Acid Tests to reduce the risk of transmission of Hepatitis B Virus”; “Implementation of an Acceptable Full-Length and Abbreviated Donor History Questionnaires for use in screening donors of source plasma and for screening frequent donors of blood and blood components”; and “Blood Establishment Computer System Validation in the User’s Facility”.
- Issued a draft guidance on “Donor Questioning, Deferral, Reentry and Product Management to reduce the risk of Malaria transmission.”

Approvals Include

- Botulism Antitoxin Heptavalent (March 2013) for the treatment of botulism following documented or suspected exposure to botulinum neurotoxin. This product was approved using the Animal Rule since human efficacy studies were not feasible or ethical.
- Complex submissions from five different manufacturers consisting of 16 original BLAs, one efficacy supplement, seven Prior Approval Supplements and four 510(k)s for S.A. DG Gel® cards in July 2013. This is the second U.S. licensed blood typing and antibody identification system using gel column agglutination technology and will help with blood typing discrepancies.
- Recombinant Factor IX, RIXUBIS (June 2013), the first Factor IX product to have the indication for routine prophylaxis to prevent or reduce the frequency of bleeding episodes. It is the second approved recombinant Factor IX product, adding to choices for treatment for Factor IX deficient patients and reducing the risk of shortages.
- Kcentra (April 2013) for the urgent reversal of vitamin K antagonist (VKA) anticoagulation in adults with acute major bleeding; it does not require blood group typing or thawing, allowing for it to be administered more quickly than frozen plasma.

On-going and Upcoming Challenges

- **New Technologies for Complex Products, Emerging Diseases and Bioterrorism Threats** - Most products the FDA Biologics Program regulates are complex biological entities including live agents and cells that involve novel and cutting-edge technologies and evolving science, such as gene therapies. The Biologics program also plays an important role in protecting the public against the threat of emerging infectious diseases, neglected tropical diseases, and potential bioterrorism agents, for example, CBER is very engaged in pandemic preparedness activities in response to the H7N9 threat.
- **FDASIA Implementation** – Implementing the new requirements for PDUFA V and MDUFA III and the Generic Drug and the Biosimilar User Fee programs.
- **White Oak Move** - CBER is planning to move to a single state of the art facility at White Oak in the spring of 2014.



***Thank You for
Your Interest***

