DEPARTMENT of HEALTH and HUMAN SERVICES

Fiscal Year

2017

Food and Drug Administration

Justification of
Estimates for
Appropriations Committees

LETTER FROM THE ACTING COMMISSIONER

I am pleased to present the FY 2017 Food and Drug Administration (FDA) Budget.

FDA has broad responsibilities to protect and promote public health. Indeed, we are tasked with overseeing products that account for about 20 cents of the consumer dollar. FDA is responsible for ensuring: a safe, sanitary, and wholesome food supply; safe and effective drugs, devices, and biological therapeutics; availability of medical countermeasures to address public health emergencies; reducing harms from tobacco products; and effective management of critical laboratory, office, and support facilities.

FDA continues to work to obtain the most public health value for the federal dollar as we address expanded regulatory responsibilities and scientific challenges. In recent years, FDA has assumed the requirements of the Food Safety Modernization Act of 2011, put in place new approval pathways for drugs, initiated new activities around compounding, and taken on a major program on tobacco oversight and regulation, to name just a few important examples. Industry has changed, certain sectors have grown, the complexity of applications has increased substantially with genomics data, and production methods have evolved. Innovation and science are now occurring at a faster pace than ever. Moreover, our global responsibilities continue to grow as more of our foods and medical products come from abroad.

Despite these challenges, FDA has accomplished significant and notable achievements over the past year in the areas of food safety, medical product innovation, safety, and oversight, nutrition, antimicrobial resistance, and tobacco product regulation. For example, FDA took major steps to prevent foodborne illness by finalizing five rules that will implement the landmark Food Safety Modernization Act. FDA also approved more than 40 novel drugs, including treatments for patients with cancer, drugs for patients with heart failure, and another robust year of approvals for rare or "orphan" diseases. In addition, FDA unveiled a dynamic public education campaign designed to prevent and reduce tobacco use among at-risk African Americans, Hispanics, and Asian American/Pacific Islander youth.

In FY 2017, FDA is requesting a total of $5.1 billion that includes a targeted but significant net increase of $15 million in budget authority and $75 million in new mandatory resources to:

- support food safety – focused on produce safety and oversight of imports
- improve medical product safety and availability, including efforts to improve cancer diagnostics and treatments as part of the Vice President's Cancer Moonshot
- address infrastructure challenges at owned facilities to enable FDA to keep up with its expanded mission and respond to public health emergencies.

FDA is fully committed to continuing to meet the needs and expectations of the American people by ensuring the safety and effectiveness of FDA-regulated products.

Stephen M. Ostroff, M.D.
Acting Commissioner of Food and Drugs

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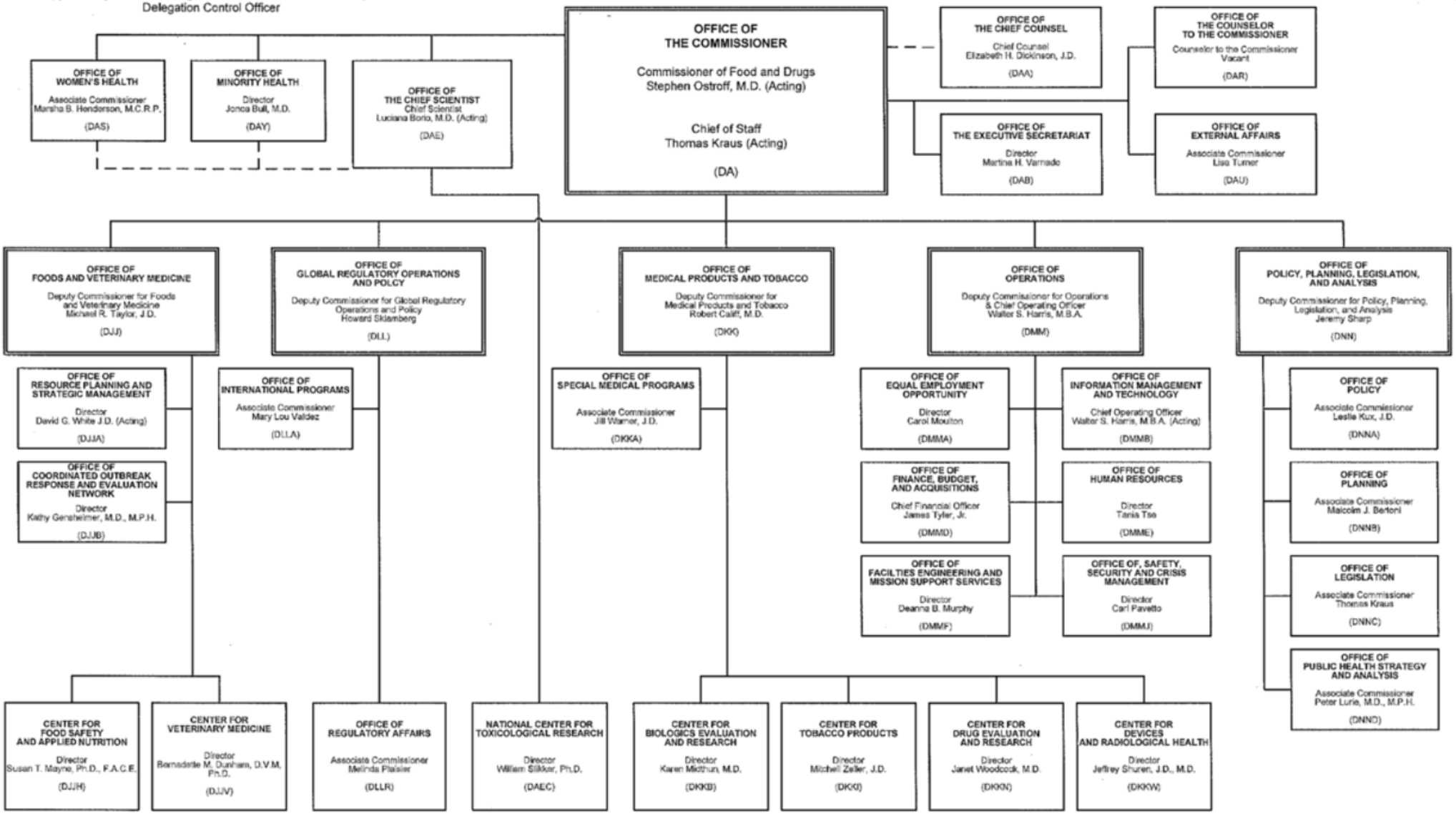
Approved by the FDA Reorganization Coordinator and Principal Delegation Control Officer

FOOD AND DRUG ADMINISTRATION



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EXECUTIVE SUMMARY

This Executive Summary describes the fiscal year (FY) 2017 Budget for the U.S. Food and Drug Administration (FDA). FDA is the agency within the U.S. Department of Health and Human Services (HHS) responsible for protecting and promoting public health by ensuring the safety, effectiveness, and security of human and animal drugs, biological products, and medical devices; ensuring the safety of food and feed, cosmetics, and radiation-emitting products; and regulating tobacco products.

RECENT ACCOMPLISHMENTS

FDA delivers significant, quantifiable results that help Americans every day and are a sound investment. A selection of recent accomplishments is presented below.

Food Safety

In fall 2015, FDA finalized major new food safety rules to implement the Food Safety Modernization Act (FSMA), the most sweeping overhaul of the country's food safety system since the first federal food safety law was passed in 1906. FSMA has improved FDA's capacity to:

- prevent food safety problems
- detect and respond to food safety problems
- ensure the safety of imported food.

FDA conducted extensive internal planning and external dialogue with other government agencies, industry, and foreign partners to ensure that FSMA rules are implemented in a timely, effective, and collaborative manner. The five foundational FSMA rules issued in 2015 were:

- preventive controls for human food
- preventive controls for animal food
- produce safety
- Foreign Supplier Verification Program (FSVP) for imported foods
- accreditation of third-party certification bodies.

The preventive controls for human food and preventive controls for animal food rule focus on preventing problems in order to improve the safety of food, including food for animals. The human food rule applies to many domestic and foreign firms that manufacture, process, pack, or hold human food. The preventive controls provisions of the animal food rule apply to domestic and imported animal food, including pet food, animal feed, and raw materials and ingredients. Under these rules, firms are required to:

- have written plans that identify hazards
- specify the steps that will be put in place to minimize or prevent those hazards
- identify monitoring procedures and record monitoring results
- specify what actions will be taken to correct problems that arise.

The produce safety rule addresses standards for produce safety by establishing enforceable science- and risk-based processes for the growing, harvesting, packing, and holding of fruits and vegetables on farms. The Foreign Supplier Verification Programs (FSVP) rule will require importers to verify that their suppliers meet the same level of public health protection as required

of domestic producers. Requirements for verification activities are based primarily on the type of food, nature of the hazard identified, and the foreign supplier.

Finally, the accreditation of third-party certification rule will allow bodies to be certified to conduct food safety audits and to certify that foreign food facilities and food produced by such facilities meet applicable FDA food safety requirements. In the coming year, FDA will issue the final two foundational FSMA rules for sanitary transportation and intentional adulteration.

Precision Medicine

FDA is a key participant in the Precision Medicine Initiative, launched by President Obama in January 2015. In addition to supporting national efforts led by the White House, FDA approved several new Precision Medicine-based therapies in the last year, thus bringing the President's vision directly to patients who can immediately benefit from these innovative treatments.

For example, FDA approved a targeted therapy for first-line treatment of patients with metastatic non-small cell lung cancer whose tumors harbor certain gene mutations. Lung cancer is the leading cause of cancer-related death in the U.S., with 158,040 Americans estimated to die from the disease this year.

The identification of patients with these gene mutations is made possible by an FDA-approved companion diagnostic test. The success of Precision Medicine depends on having accurate, reproducible, and clinically useful companion diagnostic tests to identify patients who can benefit from targeted therapies. During the past year, FDA also issued guidance for industry regarding companion diagnostic devices to help spur innovation in the development of these targeted therapies.

To further advance translation of the vision of Precision Medicine into cures for patients with serious illnesses, FDA launched precisionFDA. This initiative supplies a platform where the commercial and academic communities can test, pilot, and validate new approaches to ensure the accuracy of genetic tests. These efforts are critical to advancing the science needed to develop the necessary standards for tests used to detect and interpret differences in an individual's genetic make-up. The understanding of these differences is key to providing useful and actionable information about the state of a person's health and their future risk of disease, in order to inform their treatment choices.

Understanding gender differences is also vital to providing Precision Medicine and improving drug safety assessments. Because side-effects of drugs based on gender differences are not always adequately addressed in preclinical evaluations, better methods are needed. To this end, in FY 2015, FDA scientists found 29 enzymes that acted differently based on gender and that are involved in the metabolism of more than 600 drugs. Also last year, FDA scientists developed a mouse model of gender-related differences in the anticancer drug, doxorubicin (DOX). They observed that male mice reacted more strongly to DOX than female mice.

Combating Antibiotic-Resistant Bacteria

Antibiotics are important in combating infectious diseases in humans and animals. Antibiotic resistance, the ability of bacteria to survive in the presence of antibiotics, is a growing public-health threat. FDA is a critical participant in the Administration's Combating Antibiotic-Resistant Bacteria (CARB) National Action Plan to address the threat of antibiotic-resistant bacteria, which includes efforts to:

- slow the emergence of antibiotic resistant bacteria
- advance the development of diagnostics to detect antimicrobial resistance
- improve antimicrobial stewardship and reduce inappropriate antibiotic use
- accelerate the development of new treatment for antibiotic-resistant bacteria
- develop new strategies to address bacterial infections.

FDA's roles and responsibilities with respect to addressing antimicrobial resistance include:

- appropriate and responsible use of antibiotics in foods and medicines
- surveillance for antimicrobial resistance among foodborne bacteria
- interventions to reduce resistance among foodborne bacteria
- therapeutics, diagnostic tests, and vaccines to manage antimicrobial resistant organisms
- supply chain safety to protect consumers from product adulteration and substandard or counterfeit medical products.

FDA has also been actively implementing the Generating Antibiotics Incentives Now (GAIN) Act, a provision of the Food and Drug Administration Safety and Innovation Act (FDASIA), to promote the development of antibacterial and antifungal drugs. The White House convened a "Forum on Antibiotic Stewardship" to bring together key human and animal health constituencies involved in antibiotic stewardship.

FDA served as a key Federal Animal Health expert during the forum and engaged with stakeholders to gain the commitments sought by the White House. Key human and animal health stakeholders committed to implement changes over the next five years to slow the emergence of resistant bacteria, and prevent the spread of resistant infections.

FDA published the Veterinary Feed Directive (VFD) final rule in June 2015,[1] and in September 2015, FDA issued revised Guidance for Industry #120, "Veterinary Feed Directive (VFD) Regulation Questions and Answers." These publications are an important piece of the overall strategy to promote the judicious use of antimicrobials in food-producing animals and brings the use of these drugs under veterinary supervision so that they are used only when necessary for assuring animal health.

Drug Shortages

FDA continues to make significant progress in reducing the number of drug shortages, from a high of 251 new shortages in 2011 to just 44 new shortages in 2014. Currently, FDA is working to resolve over 70 shortages that began in 2014 and prior years, which is a decrease from the 97 ongoing shortages tracked at the end of 2013. With the passage of Public Law 112-144 Food and Drug Administration Safety and Innovation Act (FDASIA) in 2012, regulations were put in place which allowed FDA to begin to gain control over these staggeringly high numbers and effectively hold industry accountable to require early notification of discontinuances or interruptions in manufacturing of all covered prescription drugs. These requirements have helped FDA to work early on with industry to address problems before shortages occur and have resulted in decreasing numbers of new shortages in recent years.

On March 4, 2015, FDA launched its first mobile application specifically designated to speed public access to valuable information regarding drug shortages. The new mobile application

[1] The veterinary feed directive final rule can be found at: http://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm448446.htm

offers easy and fast public access to important drug shortage information. Healthcare professionals and pharmacists need real-time information about drug shortages to make treatment decisions, and this application will provide the necessary early notification from manufacturers of a potential disruption in product supply to make these decisions.

Opioids

Identifying solutions to prevent prescription opioid abuse is a top priority for the FDA. In regulating opioid drugs, it is critical to incentivize innovations that are less likely to result in abuse and addiction, and still effective, while also ensuring that patients with debilitating pain have access to effective pain management treatment.

On April 1, 2015, FDA issued final guidance, "Abuse-Deterrent Opioids – Evaluation and Labeling," to assist industry in developing opioid drug products with potentially abuse-deterrent properties. Prescription opioid products are an important component of modern pain management, but abuse and misuse of these products have created a serious and growing public health problem. One potentially important step towards creating safer opioid analgesics has been the development of opioids that are formulated to deter abuse.

FDA has recently approved additional treatment options for patients who overdose on opioids. In FY 2014, FDA approved a new form of naloxone – a drug that rapidly reverses the effects of an opioid overdose – with an auto-injector to enable a caregiver to administer the drug. This approval offers a new emergency treatment tool to help prevent the tragedy of opioid drug overdose. Additionally, FDA is committed to using its authorities to facilitate the development of overdose reversal drugs. Using expedited approval processes, FDA approved both an auto-injector in FY 2014 and an intranasal formulation in November 2015, both designed for use by lay bystanders, as well as first responders. Both products were approved ahead of their Prescription Drug User Fee Act goal dates—i.e., the date when the Agency was scheduled to complete its review of the applications.

FDA continues to explore alternative methods for making naloxone more available, perhaps without a prescription. Also, in July 2015, FDA held a scientific workshop about the uptake of naloxone in certain medical settings – such as on ambulances and in association with prescriptions for opioids – as well as outside of conventional medical settings to reduce the incidence of opioid overdose fatalities. At the meeting, stakeholders explored legal, regulatory, logistical and clinical aspects related to making naloxone more widely available, and discussed how public health groups can work together to use naloxone to reduce the risk of overdose.

Tobacco Regulation

On May 12, 2015, FDA launched the first phase of its "Fresh Empire" campaign – a youth-focused effort to reduce the number of smokers in our country. The campaign is designed to prevent and reduce tobacco use among at-risk multicultural youth aged 12 to 17 including African American, Hispanic, and Asian American/Pacific Islander youth.

As of December 31, 2015, FDA had contracts to conduct compliance check inspections at tobacco retail establishments with 55 States, territories, and tribal jurisdictions. Compliance check inspections pertain to tobacco marketing, sales, and distribution of tobacco products at retail locations. Since the October 2010 inception of FDA's Tobacco Retail Compliance Check Inspection Program through December 2015, FDA has:

- completed over 549,300 inspections
- issued over 38,800 warning letters
- levied more than 6,400 civil monetary penalties
- filed 8 No-Tobacco-Sale Order (NTSO) complaints
- commissioned more than 2,300 officers and employees from the States, territories, and their political subdivisions and provides a training program for those that perform inspections.

On November 10, 2015, FDA announced that for the first time it has authorized the marketing of new tobacco products through the premarket tobacco application (PMTA) pathway. The marketing orders are for eight PMTA applications received in March 2015. FDA uses a rigorous scientific review to determine if new tobacco products should come to market under this pathway.

Before making marketing claims that imply modified risk, manufacturers must submit a Modified Risk Tobacco Product (MRTP) application, and receive an FDA order authorizing a claim that the product reduces harm or the risk of tobacco-related disease.

FDA is currently conducting substantive reviews on ten MRTP applications received in June 2014. These MRTP applications were made available to the public in August 2014, and a docket was opened for public comment. FDA continues to review these applications and intends to issue a decision when the substantive scientific review is complete.

OVERVIEW OF THE BUDGET REQUEST

The FY 2017 Budget Request is $5.1 billion, an overall increase of eight percent or $358.3 million compared to the FY 2016 Enacted level. The budget includes $2.7 billion for budget authority – an increase of one-half of one percent or $14.6 million compared to the FY 2016 Enacted level, $2.3 billion for user fees[2] – an increase of twelve percent or $268.7 million compared to the FY 2016 Enacted level, and $75.0 million in new mandatory funding to support the Vice President's Cancer Moonshot.

(Dollars in Thousands)	FY 2016 Enacted			FY 2017 President's Budget			FY 2017 President's Budget +/- FY 2016 Enacted		
	Food Safety	Medical Product Safety and Availability	Total	Food Safety	Medical Product Safety and Availability	Total	Food Safety	Medical Product Safety and Availability	Total
Budget Authority:									
Foods	987,328	---	987,328	1,012,603	---	1,012,603	25,275	---	25,275
Human Drugs	---	491,503	491,503	---	491,503	491,503	---	---	---
Biologics	---	215,443	215,443	---	215,443	215,443	---	---	---
Animal Drugs and Feeds	125,305	33,347	158,652	125,305	36,547	161,852	---	3,200	3,200
Devices and Radiological Health	---	323,253	323,253	---	325,764	325,764	---	2,511	2,511
National Center for Toxicological Research	10,233	53,098	63,331	7,179	53,098	60,277	-3,054	---	-3,054
FDA Headquarters	77,212	89,375	181,587	77,212	91,075	178,287	---	1,700	-3,300
FDA White Oak Consolidation	---	---	48,044	---	---	43,044	---	---	-5,000
Other Rent and Rent Related	37,078	36,406	73,484	36,300	35,643	71,943	-778	-763	-1,541
GSA Rental Payments	82,500	94,183	176,683	79,477	90,731	170,208	-3,023	-3,452	-6,475
SUBTOTAL, BA Salaries and Expenses	1,319,656	1,336,608	2,719,308	1,338,076	1,339,804	2,730,924	18,420	3,196	11,616
Building and Facilities	---	---	8,788	---	---	11,788	---	---	3,000
Total BA	1,319,656	1,336,608	2,728,096	1,338,076	1,339,804	2,742,712	18,420	3,196	14,616
Total User Fees	16,551	1,393,122	2,017,191	209,767	1,431,079	2,285,908	193,216	37,957	268,717
Total Mandatory Resources - Directed Transfer	---	---	---	---	75,000	75,000	---	75,000	75,000
Total Program Level	1,336,207	2,729,730	4,745,287	1,547,843	2,845,883	5,103,620	211,636	116,153	358,333

Budget Structure and Strategic Plan Framework

The Budget is described in terms of budget authority and user fees and is broken down into the following major activities.

- **Food Safety** – ensures the food and feed supply is safe, sanitary, wholesome, and honestly labeled, and cosmetic products are safe and properly labeled.
- **Medical Product Safety and Availability** – ensures that safe and effective human and animal drugs, biological products, devices, and radiological products are available to improve the health of the people in the U.S. and that medical countermeasures – including drugs, vaccines, and diagnostic tests – to counter chemical, biological, radiological, nuclear, and emerging infectious disease threats – are safe, effective, and secure.
- **Tobacco Regulation** – protects Americans from tobacco-related death and disease by regulating the manufacture, distribution, and marketing of tobacco products, and by educating the public about tobacco products and the dangers their use poses.
- **Infrastructure: Facilities and Rent Investments –** ensures FDA staff have functioning offices and labs across the country to execute its food safety and medical product safety mission.

[2] Includes proposed Food Facility Registration and Inspection, Food Import, International Courier, Cosmetics, and Food Contact Substance Notification fees and proposed increase to the Export Certification fee.

The Budget is structured around FDA's strategic plan framework,[3] which provides strategic direction to help FDA continue to serve and protect the American people. FDA's Strategic Goals include improving and safeguarding access to – and making better informed decisions about – the products FDA regulates, as well as providing effective oversight of these products. FDA links program-specific actions to support the following priorities within these goals:

- Regulatory Science
- Globalization
- Safety and Quality
- Smart Regulation
- Stewardship.

FOOD SAFETY

The FY 2017 Budget Request is $1.5 billion for Food Safety, an increase of $211.6 million above the FY 2016 Enacted Level. The budget includes $1.3 billion for budget authority – an increase of one percent or $18.4 million compared to the FY 2016 Enacted level – and $209.8 million for user fees – an increase of $193.2 million compared to the FY 2016 Enacted level.

The Budget will improve food and feed safety through the continued implementation of the Food Safety Modernization Act of 2011 (FSMA). This request supports FDA's strategic goal to Enhance Oversight and strategic priorities in the areas of Regulatory Science, Globalization, Safety and Quality, and Smart Regulation.

BUDGET AUTHORITY

Food Safety: FY 2017 Budget Authority Increase Request

(Dollars in Thousands)	FSMA Implementation						Reductions and Program Changes		Total Request	
	National Integrated Food Safety System		Import Safety		Increase Subtotal					
	FTE	$000	FTE	$000	FTE	$000	FTE	$000	FTE	$000
Salaries and Expenses Account:										
Foods	**9**	**11,262**	**5**	**14,013**	**14**	**25,275**	---	---	**14**	**25,275**
Center	---	---	---	---	---	---	---	---	---	---
Field	9	11,262	5	14,013	14	25,275	---	---	14	25,275
NCTR	---	---	---	---	---	---	---	**-3,054**	---	**-3,054**
Other Rent and Rent Related	---	---	---	---	---	---	---	**-778**	---	**-778**
GSA Rental Payments	---	---	---	---	---	---	---	**-3,023**	---	**-3,023**
Subtotal, Salaries and Expenses Account	**9**	**11,262**	**5**	**14,013**	**14**	**25,275**	---	**-6,855**	**14**	**18,420**
Total Budget Authority	**9**	**11,262**	**5**	**14,013**	**14**	**25,275**	---	**-6,855**	**14**	**18,420**
Non-Field Activities	---	---	---	---	---	---	---	-3,054	---	-3,054
Field Activities	9	11,262	5	14,013	14	25,275	---	---	14	25,275
Rent Activities	---	---	---	---	---	---	---	-3,801	---	-3,801

[3] *FDA Strategic Priorities 2014-2018,* September 30, 2014, http://www.fda.gov/aboutfda/reportsmanualsforms/reports/ucm227527.htm.

FSMA Implementation

National Integrated Food Safety System: Produce Safety

FDA's FY 2017 budget will build on the FY 2016 investments in enhancing the national integrated food safety system, which is a central element of FSMA's mandate to FDA and crucial to successful implementation of FSMA. The FY 2017 budget will support state capacity to implement the FSMA produce safety rule through funding of state cooperative agreements and grants.

FDA's implementation strategy for the FSMA produce safety rule depends on states being full partners with FDA and the primary frontline interface with growers to foster compliance with the rule. In FY 2017, FDA and state efforts regarding implementation of the produce safety rule will focus on providing educational and technical assistance to industry, especially small and very small farming operations. This effort requires building the capacity and expertise that state agencies will need to deliver timely and effective education and technical assistance so farmers can comply with the new produce safety rule.

FY 2017 resources will be used to conduct non-regulatory pre-assessments to help growers gauge their current compliance and improve as needed to comply with the new rule. This funding will also build state capacity and continue planning for future inspections to verify compliance.

Import Safety

The FY 2017 request will enable FDA to continue progress toward implementing the multifaceted new import safety system mandated by Congress, including the Foreign Supplier Verification Program (FSVP) rule, foreign food facility and produce inspections, and partnerships with foreign governments.

Under the FSVP rule importers must verify that imported food has been produced in a manner consistent with FSMA's new standards for produce safety and preventive controls. This preventive approach to import safety will improve food safety and consumer confidence in imported food but presents an enormous challenge for both FDA and food importers, given that approximately 90,000 consignees received food import shipments in FY 2015.

Building on the FY 2016 investment, FSVP will require additional funding to:

- hire and train staff to perform FSVP inspections
- provide extensive training and technical assistance for importers
- continue outreach to foreign firms and foreign government partners on new FSVP requirements.

To improve import safety, FDA will also expand its overseas presence, as mandated by FSMA. This expansion includes increasing FDA inspections and providing better targeting of foreign food facilities, as well as working with and assisting foreign governments to ensure the safety of food before it is exported to the United States.

FDA will also work with countries that already have capable food safety regulatory systems to enter into "systems recognition" agreements that will enable FDA to rely, where appropriate, on the food safety efforts of countries whose food and feed safety systems provide protections comparable to those in the United States. This investment will strengthen food safety and

efficiency by allowing FDA to leverage resources and focus its efforts on imports from areas of higher risk.

USER FEES

Proposed Food Import User Fee

FDA will use $105.3 million in new resources provided by the proposed import user fee to facilitate the entry of safe food through enhanced border staffing, improved information systems and other importer support and port of entry streamlining.

Proposed Food Facility Registration and Inspection User Fee

The $61.3 million proposed fee will provide resources to further modernize the FDA inspection program through the further development and implementation of new inspection models and tools, including training in the new models and information technology to improve targeting and risk-based efficiency of inspection. The fee revenue will also provide essential resources for investment in the state training and capacity needed to fully achieve the vision of a national integrated food safety system that provides high quality, consistent and coordinated food safety oversight nationwide.

Proposed Cosmetics User Fee

FDA will use $20.2 million in new resources to support FDA cosmetic safety responsibilities. Additional funds will strengthen FDA efforts to develop regulations and guidance, enhance safety evaluations, and improve cosmetics-related communication and outreach to promote greater safety and understanding of cosmetic products.

Proposed Food Contact Substance Notification User Fee (FCN)

FDA will use $5.2 million in new resources to provide a stable, long-term source of funding to supplement budget authority. FDA has statutory responsibility for the safety of all food contact substances in the United States. The Federal Food Drug and Cosmetic Act specifies that the FCN program can operate only if adequately funded.

MEDICAL PRODUCT SAFETY AND AVAILABILITY

The FY 2017 Budget Request is $2.8 billion for Medical Product Safety and Availability, an increase of $116.2 million above the FY 2016 Enacted level. The request includes $1.3 billion for budget authority – an increase of 0.2 percent or $3.2 million compared to the FY 2016 Enacted level, $1.4 billion for user fees – an increase of three percent or $38.0 million compared to the FY 2016 Enacted level, and $75.0 million in new mandatory funding for the Vice President's Cancer Moonshot.

With this request, FDA will improve medical product safety and availability in five key areas:

- supporting animal drug and medical device review
- evaluating Precision Medicine-based diagnostics and treatments
- improving the safety of compounded drugs
- combating antibiotic resistant bacteria
- improving cancer diagnostics and treatments.

The request supports FDA's strategic goals to Improve and Safeguard Access and Enhance Oversight. Additionally, it supports FDA strategic priorities in the areas of Regulatory Science, Globalization, Safety and Quality, Smart Regulation, and Stewardship.

BUDGET AUTHORITY

Medical Product Safety and Availability: FY 2017 Budget Authority Increase Request

(Dollars in Thousands)	Supporting Animal Drug and Medical Device Review		Precision Medicine		Pharmacy Compounding		Combating Antibiotic Resistant Bacteria		Increase Subtotal		Reductions and Program Changes[1]		Total Request	
	FTE	$000	FTE	$000	FTE	$000	FTE	$000	FTE	$000	FTE	$000	FTE	$000
Salaries and Expenses Account:														
Human Drugs	---	---	---	---	2	1,000	---	-1,000	2	---	---	---	2	---
Center	---	---	---	---	1	560	---	-1,000	1	-440	---	---	1	-440
Field	---	---	---	---	1	440	---	---	1	440	---	---	1	440
Animal Drugs and Feeds	8	2,200	---	---	---	---	1	1,000	9	3,200	---	---	9	3,200
Center	8	2,200	---	---	---	---	1	1,000	9	3,200	---	---	9	3,200
Field	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Devices and Radiological Health	---	711	3	1,800	---	---	---	---	3	2,511	---	---	3	2,511
Center	---	711	3	1,800	---	---	---	---	3	2,511	---	---	3	2,511
Field	---	---	---	---	---	---	---	---	---	---	---	---	---	---
FDA Headquarters	---	---	---	200	---	---	---	---	---	200	---	1,500	---	1,700
Other Rent and Rent Related	---	---	---	---	---	---	---	---	---	---	---	-763	---	-763
GSA Rental Payments	---	---	---	---	---	---	---	---	---	---	---	-3,452	---	-3,452
Subtotal, Salaries and Expenses Account	8	2,911	3	2,000	2	1,000	1	---	14	5,911	---	-2,715	14	3,196
Total Budget Authority	8	2,911	3	2,000	2	1,000	1	---	14	5,911	---	-2,715	14	3,196
Non-Field Activities	8	2,911	3	2,000	1	560	1	---	13	5,471	---	1,500	13	6,971
Field Activities	---	---	---	---	1	440	---	---	1	440	---	---	1	440
Rent Activities, B&F, and White Oak	---	---	---	---	---	---	---	---	---	---	---	-4,215	---	-4,215

[1]Includes restoration of $1.5 million transferred from FDA to HHS OIG in FY 2016.

Precision Medicine

Precision Medicine is a new model in which disease prevention and treatment are based on the biological profile and preferences of each individual. The FY 2017 Budget provides $4.4 million in budget authority for Precision Medicine, an increase of $2.0 million above the FY 2016 Enacted level. Advances in technology, such as next generation sequencing (NGS), have dramatically improved the ability to determine which patients are most likely to be susceptible to a specific disease – and thus likely to benefit from preventive measures – and which patients are most likely to respond to, or suffer complications from, a specific treatment. This concept was described by President Obama in his 2015 State of the Union Address as the ability to determine the right treatment for the right patient at the right time.

With the requested increase in FY 2017, FDA will establish the National Medical Device Evaluation System (NES) to identify patients who benefit most or do not benefit from specific types of devices thereby advancing Precision Medicine. The NES will leverage real world data generated as a part of routine clinical practice to spur medical device innovation, faster patient access to safe and effective technologies, and reduce costs to the U.S. healthcare system from new safety problems. FDA will also continue to invest in precisionFDA, which provides a crowd-sourced, cloud-based platform to advance regulatory science around NGS-based analytical tools and datasets.

Compounding

The FY 2017 request will allow FDA to improve oversight of human drug compounding through sustained or increased inspection and enforcement activities, policy development and implementation, and state collaboration and coordination. Increased efforts in these areas will prevent outbreaks that could result in deaths of or injuries to patients who receive poor quality

compounded drugs. FDA has a unique responsibility to protect and promote the public health by working to reduce the risks of compounded human drug products.

Title I of the Drug Quality and Security Act (DQSA), the Compounding Quality Act, provides FDA with additional authorities to strengthen oversight of compounding. FDA's capacity to effectively oversee human drug compounding will be limited without additional resources. Insufficient oversight will increase the likelihood of outbreaks and serious adverse events resulting from poor quality compounded drugs.

During its inspections of compounders, FDA continues to identify serious problems at facilities that are making drugs expected or intended to be sterile. For example, FDA has seen:

- the use of non-sterile drinking water dispensed from a top-loaded bottled water dispenser to make injectable drug products
- dog beds, dog feces, and dog hairs within a compounding facility, including in close proximity to the compounding room
- compounding of sterile drugs by personnel with exposed skin, which sheds particles and bacteria
- use of coffee filters to filter particulates
- toaster ovens used for sterilization
- a kitchen dishwasher and detergent used to clean sterile compounding equipment and utensils
- dead insects in ceilings
- renovations conducted next to sterile compounding operations without taking precautions to prevent contamination of the sterile products.

FDA needs additional resources to continue its inspection efforts and to take regulatory action, as appropriate, to protect the public health. The FY 2017 Budget provides $18.4 million in budget authority for Compounding, an increase of $1.0 million above the FY 2016 Enacted level.

In addition to continuing its inspection and enforcement efforts, numerous policy issues must be addressed in implementing the provisions of the FD&C Act applicable to compounding. For example, FDA intends to promulgate specific Current Good Manufacturing Practice (CGMP) requirements for outsourcing facilities and determine regulatory policies for activities conducted by outsourcing facilities that are not covered by section 503B, such as mixing, diluting, and repackaging of biological products and compounding animal drugs.

Outsourcing facilities are also required to report adverse events associated with their products and FDA needs resources to review these reports and investigate the adverse events as appropriate.

Combating Antibiotic Resistant Bacteria

Antibiotics are important in combating infectious diseases in humans and animals. Antibiotic resistance, the ability of bacteria to evade or resist antibiotics, is a growing public health threat. *The National Action Plan for Combating Antibiotic-Resistant Bacteria*, issued by the White House in March 2015, is intended to guide the activities of the U.S. Government as well as guide action by public health, healthcare, and veterinary partners in a common effort to address urgent and serious drug-resistant threats. The FY 2017 Budget provides $41.6 million for antimicrobial

resistance activities, which includes CARB, the same as the FY 2016 Enacted level. The budget includes $39.6 million for budget authority and $2.0 million for user fees.

In FY 2017, the Animal Drugs and Feeds Program will work to address public health safety concerns associated with antimicrobial drug use in animals and to better protect antibiotic effectiveness for both human and animal populations. FDA will work in collaboration with USDA to support efforts to monitor antimicrobial drug use in food-producing animals through the periodic collection of nationally representative on-farm data on antimicrobial-use practices and resistance. FDA will also coordinate with USDA to develop a U.S. Government annual assessment report, including identification of key outcome measures.

Supporting Animal Drug and Medical Device Review

FDA requests $2.9 million to support ongoing activities within Animal Drug Review Program and Devices Program to achieve enhanced and predictable review performance that meets industry, congressional, and public expectations.

The Animal Drug Review Program for pioneer animal drugs is an important FDA program, supporting both human and animal health. The program strives to meet performance goals for statutory review timeframes, which has allowed pioneer animal drugs to advance to market faster and ensure the availability of animal drug products that are safe and effective for animals as well as for the public with respect to animals intended for food consumption. The increased funding requested will enable FDA to continue to meet premarket animal drug review requirements by having the necessary review staff to carry out these activities...

The Devices Program strives to increase the efficiency of regulatory processes with a goal of reducing the time it takes to bring safe and effective medical devices to the U.S. market. The requested increase supports ongoing review activities in the Devices Program to meet statutory requirements for the review of medical device applications. As a result, the Devices Program can continue to ensure the safety and effectiveness of medical devices that Americans rely on every day, while facilitating scientific innovations that extend and improve lives.

MANDATORY RESOURCES – DIRECTED TRANSFER

Vice President's Cancer Moonshot

FDA requests $75 million in mandatory resources as part of the Vice President's Cancer Moonshot in order to accelerate progress in cancer – to reduce the number of people who develop cancer and to improve the outcome for those who do. Thanks to sustained federal investment in biomedical research, current cancer mortality rates are about 15 percent lower than they were a decade ago. Federal investments in basic, epidemiologic, and clinical research have led to significant advances in the prevention, screening, and treatment of cancer.

In order to support the dramatic increase in the number, complexity, and potency of cancer diagnostics and therapeutics, FDA will establish an Oncology Center of Excellence to streamline collaboration across FDA's Human Drugs, Biologics, and Devices and Radiological Health, Programs. Though the Center will largely be virtual, involving staff from current programs, FDA requires new resources for a dedicated core staff that will provide leadership direction and project management.

The Center will closely interface with the NIH National Cancer Institute (NCI) to streamline the development and expedite the approval of novel devices, drugs, biologics, and combination

products. The Center will provide NCI intramural and extramural investigators with "one stop shopping" for regulatory and clinical development advice, such as support for the development of:

- new vaccines to prevent cancers caused by viruses
- new and advanced diagnostics for early screening and detection of cancer
- novel single entity and combination medical products.

The Center will also support improved access to new treatments through cancer clinical trials and access programs, and it will enhance sharing of cancer data from clinical trials to promote biological and clinical breakthroughs.

In addition to facilitating a holistic approach to the review of medical products for cancer, the multidisciplinary nature of the Oncology Center of Excellence, combining regulatory scientists and reviewers with expertise in drugs, biologics, and devices will also foster and expedite the development of novel combination products for the treatment of cancer (e.g., nanoparticles coated with a drug or a biologic to deliver therapy locally to a tumor). With the continued development of companion diagnostic tests and the use of combinations of drugs and biologics to treat cancer using methods developed through the science of precision medicine, to most benefit those affected, FDA needs to take an integrated approach in its evaluation of products for the prevention, screening, diagnosis, and treatment of cancer.

INFRASTRUCTURE: FACILITIES AND RENT INVESTMENTS

The FY 2017 Budget Request provides an increase of $3.6 million over the FY 2016 Enacted level for urgent facility investments that will provide improve the functioning of offices and labs across the country to ensure FDA can execute its Food Safety and Medical Product Safety and Availability mission. This increase includes $3.0 million in Buildings and Facilities funding to address repairs, improvements and mission support needs at FDA's owned laboratories and other critical owned facilities across the United States. The request also supports increased rent for FDA's 291 leased buildings, rent-related funding for operations and maintenance needs, and for White Oak operations.

FDA's responsibilities continue to escalate as we work to fulfill the mandates of groundbreaking legislation passed in recent years. This expansion of authorities urgently requires that FDA's critical infrastructure at its owned locations is properly functioning to enable FDA to carry out its mission and respond to food safety and medical product emergencies. This investment will prevent the further deterioration of FDA's owned facilities.

CURRENT LAW AND PROPOSED USER FEES

FDA requests a $66.4 million increase in current law user fees for the review of animal drugs and the review and surveillance of human drugs, medical and mammography devices, food and feed, color additives, export certification, and tobacco products. The request includes statutorily mandated increases, infrastructure, and inflation. These increases will fund options for review of medical products used for treating and curing diseases and strategies to reduce the costs of illness and death caused by tobacco products.

Proposed users fees that impact both Food Safety and Medical Product Safety and Availability are displayed below.

Proposed International Courier User Fee

FDA requests $6.0 million in new user fees to increase surveillance of FDA-regulated commodities at express courier hubs. About 20 percent, or $1.2 million, of this proposed fee will support imported food safety. Almost 80 percent, or $4.8 million, of this proposed fee will support imported medical product safety.

Export Certification Fee

FDA is proposing an increase of $4.3 million for the export certification program by increasing the statutory maximum for the certification fee from $175 to $600 per certification and including an inflation adjustment factor for the statutory maximum. 21 U.S.C. § 381(e)(4), originally enacted in 1996, currently limits the maximum export certification fee to $175 per certification. Because of this cap and increases in the costs of maintaining the export certification program since the program's inception, the certification program expenditures significantly exceed the current revenue of the program. Increasing the maximum fee to an inflation-adjusted $600 per certification will allow the Agency to fully recover its costs in implementing this program.

OVERVIEW OF PERFORMANCE

The *FDA Strategic Priorities 2014-2018* focus efforts to achieve FDA's public-health mission and to fulfill its role in supporting HHS' larger mission and strategic goals. The FY 2017 Budget is structured around these priorities and goals, as discussed in the Overview of the Budget Request.

Transparency and Accountability

In April 2011, FDA launched FDA-TRACK, which is the Agency-wide performance management system. FDA-TRACK monitors, analyzes, and reports monthly performance on all FDA program offices and on key cross-cutting initiatives. Each quarter, the FDA-TRACK team uses statistical models to analyze monthly performance data collected from each office and initiative. Face-to-face briefings are then conducted with the office directors responsible for each program who present their performance data and results to FDA executive leadership.

These briefings stimulate discussion and facilitate better communication, decision-making, plan of action and ultimately, performance. Briefing summaries and performance results are then posted to the FDA-TRACK website, allowing FDA's stakeholders to monitor progress on more than 600 performance measures and 100 key projects.

The objectives of FDA-TRACK can be explained through its name:

- **T**ransparency – provides interested parties an unprecedented look into how FDA performs its work
- **R**esults – highlights performance measures and results related to the agency's public-health mission
- **A**ccountability – requires senior managers to develop, track, and report performance measures to improve the agency's accountability to the public and holds the program offices accountable for their priorities, plans and results
- **C**redibility – encourages sharing of FDA performance information which is essential for the agency's credibility and provides the opportunity to submit suggestions for continuous improvement efforts

- **K**nowledge-sharing – enables the identification of common issues and interdependencies among program offices to improve FDA's operational effectiveness, through better collaboration, and the sharing of ideas.

The performance measures in FDA-TRACK represent the foundational activities and outputs produced by FDA employees. Since the inception of FDA-TRACK, FDA has seen significant performance improvement in programs, including:

- the elimination of the backlog of generic new animal drug applications and
- increases in hospital participation in the MedSun Program.

On the operational side, FDA has dramatically improved its advisory committee vacancy rate and progressed to dramatically reduce its Freedom of Information Act backlog.

FDA-TRACK has enabled better performance by providing a medium to track progress, monitor results, discuss concerns, and communicate achievement. Over 49,000 visitors subscribe to the FDA-TRACK monthly updates.

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ALL PURPOSE TABLE

(Dollars in Thousands)	FY 2015 Final		FY 2015 Actuals		FY 2016 Enacted		FY 2017 President's Budget		FY 2017 +/- FY 2016	
	FTE	$000	FTE	$000	FTE	$000	FTE	$000	FTE	$000
Foods	**3,720**	**913,784**	**3,667**	**903,340**	**3,925**	**998,914**	**4,109**	**1,195,067**	**184**	**196,153**
Budget Authority	***3,720***	***903,403***	***3,667***	***903,340***	***3,876***	***987,328***	***3,890***	***1,012,603***	***14***	***25,275***
User Fees	---	***10,381***	---	---	***49***	***11,586***	***219***	***182,464***	***170***	***170,878***
Center	1,013	280,480	961	279,971	1,071	304,544	1,154	355,956	83	51,412
Budget Authority	1,013	279,994	961	279,971	1,069	303,994	1,069	303,994	---	---
User Fees	---	486	---	---	2	550	85	51,962	83	51,412
Food and Feed Recall	---	*243*	---	---	*1*	*243*	*1*	*243*	---	---
Voluntary Qualified Importer Program	---	*243*	---	---	*1*	*243*	*1*	*243*	---	---
Third Party Auditor Program	---	---	---	---	---	*64*	---	*64*	---	---
Food Facility Registration and Inspection	---	---	---	---	---	---	*28*	*23,717*	28	23,717
Food Import	---	---	---	---	---	---	*6*	*9,974*	6	9,974
Cosmetics	---	---	---	---	---	---	*42*	*12,995*	42	12,995
Food Contact Substance Notification	---	---	---	---	---	---	*7*	*4,726*	7	4,726
Field	2,707	633,304	2,706	623,369	2,854	694,370	2,955	839,111	101	144,741
Budget Authority	2,707	623,409	2,706	623,369	2,807	683,334	2,821	708,609	14	25,275
User Fees	---	9,895	---	---	47	11,036	134	130,502	87	119,466
Food and Feed Recall	---	*1,000*	---	---	*4*	*1,000*	*4*	*1,000*	---	---
Food Reinspection	---	*4,575*	---	---	*19*	*4,575*	*19*	*4,575*	---	---
Voluntary Qualified Importer Program	---	*4,320*	---	---	*18*	*4,320*	*18*	*4,320*	---	---
Third Party Auditor Program	---	---	---	---	*6*	*1,141*	*6*	*1,141*	---	---
Food Facility Registration and Inspection	---	---	---	---	---	---	*20*	*27,891*	20	27,891
Food Import	---	---	---	---	---	---	*46*	*86,122*	46	86,122
International Courier	---	---	---	---	---	---	*3*	*779*	3	779
Cosmetics	---	---	---	---	---	---	*18*	*4,674*	18	4,674
Human Drugs	**5,341**	**1,338,599**	**5,299**	**1,369,889**	**5,530**	**1,394,827**	**5,539**	**1,408,023**	**9**	**13,196**
Budget Authority	***2,152***	***482,287***	***2,177***	***482,243***	***2,179***	***491,503***	***2,181***	***491,503***	***2***	---
User Fees	***3,189***	***856,312***	***3,122***	***887,646***	***3,351***	***903,324***	***3,358***	***916,520***	***7***	***13,196***
Center	4,369	1,135,258	4,329	1,193,483	4,537	1,189,531	4,543	1,200,581	6	11,050
Budget Authority	1,399	346,080	1,411	346,045	1,413	355,296	1,414	354,856	1	-440
User Fees	2,970	789,178	2,918	847,438	3,124	834,235	3,129	845,725	5	11,490
Prescription Drug (PDUFA)	*2,301*	*561,252*	*2,260*	*588,892*	*2,400*	*601,643*	*2,405*	*608,835*	5	7,192
Generic Drug (GDUFA)	*664*	*211,625*	*651*	*256,254*	*664*	*215,867*	*664*	*219,740*	---	3,873
Biosimilars (BsUFA)	*5*	*15,900*	*5*	*1,896*	*59*	*16,298*	*59*	*16,706*	---	408
Outsourcing Facility	---	*401*	*2*	*396*	*1*	*427*	*1*	*444*	---	17
Field	972	203,341	970	176,406	993	205,296	996	207,442	3	2,146
Budget Authority	753	136,207	766	136,198	766	136,207	767	136,647	1	440
User Fees	219	67,134	204	40,208	227	69,089	229	70,795	2	1,706
Prescription Drug (PDUFA)	*46*	*11,453*	*38*	*6,028*	*48*	*12,276*	*48*	*12,423*	---	147
Generic Drug (GDUFA)	*173*	*54,083*	*166*	*34,180*	*173*	*55,167*	*173*	*56,158*	---	991
Biosimilars (BsUFA)	---	*1,348*	---	---	*5*	*1,382*	*5*	*1,416*	---	34
Outsourcing Facility	---	*250*	---	---	*1*	*264*	*1*	*277*	---	13
International Courier	---	---	---	---	---	---	*2*	*521*	2	521
Biologics	**1,321**	**344,267**	**1,304**	**326,290**	**1,342**	**354,901**	**1,345**	**359,989**	**3**	**5,088**
Budget Authority	***837***	***211,382***	***846***	***211,362***	***851***	***215,443***	***851***	***215,443***	---	---
User Fees	***484***	***132,885***	***458***	***114,928***	***491***	***139,458***	***494***	***144,546***	***3***	***5,088***
Center	1,095	298,979	1,072	283,230	1,109	311,209	1,112	316,212	3	5,003
Budget Authority	617	171,096	621	171,079	625	174,052	625	174,052	---	---
User Fees	478	127,883	451	112,151	484	137,157	487	142,160	3	5,003
Prescription Drug (PDUFA)	*432*	*115,493*	*408*	*100,500*	*434*	*123,801*	*433*	*128,341*	-1	4,540
Medical Device (MDUFA)	*42*	*10,549*	*42*	*11,402*	*43*	*11,475*	*47*	*11,897*	4	422
Generic Drug (GDUFA)	*4*	*1,052*	*1*	*240*	*4*	*1,072*	*4*	*1,092*	---	20
Biosimilars (BsUFA)	---	*789*	---	*9*	*3*	*809*	*3*	*830*	---	21
Field	226	45,288	232	43,060	233	43,692	233	43,777	---	85
Budget Authority	220	40,286	225	40,283	226	41,391	226	41,391	---	---
User Fees	6	5,002	7	2,777	7	2,301	7	2,386	---	85
Prescription Drug (PDUFA)	*6*	*4,810*	*7*	*2,584*	*6*	*2,084*	*6*	*2,161*	---	77
Medical Device (MDUFA)	---	*192*	---	*193*	*1*	*217*	*1*	*225*	---	8

(Dollars in Thousands)	FY 2015 Final		FY 2015 Actuals		FY 2016 Enacted		FY 2017 President's Budget		FY 2017 +/- FY 2016	
	FTE	$000	FTE	$000	FTE	$000	FTE	$000	FTE	$000
Animal Drugs and Feed	**851**	**174,783**	**880**	**175,024**	**910**	**188,632**	**933**	**196,736**	**23**	**8,104**
Budget Authority	***735***	***147,577***	***763***	***147,564***	***791***	***158,652***	***800***	***161,852***	***9***	***3,200***
User Fees	***116***	***27,206***	***117***	***27,460***	***119***	***29,980***	***133***	***34,884***	***14***	***4,904***
Center	540	119,314	564	120,925	570	122,508	591	129,533	21	7,025
Budget Authority	424	93,505	447	93,496	457	94,005	466	97,205	9	3,200
User Fees	116	25,809	117	27,429	113	28,503	125	32,328	12	3,825
Animal Drug (ADUFA)	*85*	*19,814*	*86*	*19,357*	*85*	*20,125*	*85*	*20,265*	---	140
Animal Generic Drug (AGDUFA)	*31*	*5,995*	*31*	*8,072*	*28*	*8,378*	*28*	*8,949*	---	571
Food and Feed Recall	---	---	---	---	---	---	---	---	---	---
Food Facility Registration and Inspection	---	---	---	---	---	---	*6*	*1,586*	6	1,586
Food Import	---	---	---	---	---	---	*6*	*1,528*	6	1,528
Field	311	55,469	316	54,099	340	66,124	342	67,203	2	1,079
Budget Authority	311	54,072	316	54,068	334	64,647	334	64,647	---	---
User Fees	---	1,397	---	31	6	1,477	8	2,556	2	1,079
Animal Drug (ADUFA)	---	*404*	---	*31*	*2*	*411*	*2*	*414*	---	3
Animal Generic Drug (AGDUFA)	---	*186*	---	---	*1*	*259*	*1*	*277*	---	18
Food and Feed Recall	---	---	---	---	---	---	---	---	---	---
Food Reinspection	---	*807*	---	---	*3*	*807*	*3*	*807*	---	---
Food Facility Registration and Inspection	---	---	---	---	---	---	*2*	*1,058*	2	1,058
Devices and Radiological Health	**2,087**	**440,010**	**2,190**	**442,689**	**2,117**	**450,304**	**2,166**	**463,402**	**49**	**13,098**
Budget Authority	***1,620***	***320,825***	***1,634***	***320,793***	***1,639***	***323,253***	***1,642***	***325,764***	***3***	***2,511***
User Fees	***467***	***119,185***	***556***	***121,896***	***478***	***127,051***	***524***	***137,638***	***46***	***10,587***
Center	1,585	344,278	1,675	350,180	1,602	352,048	1,635	360,836	33	8,788
Budget Authority	1,136	240,345	1,138	240,318	1,142	240,808	1,145	243,319	3	2,511
User Fees	449	103,933	537	109,862	460	111,240	490	117,517	30	6,277
Medical Device (MDUFA)	*417*	*97,810*	*507*	*104,569*	*429*	*104,991*	*459*	*111,140*	30	6,149
Mammography Quality Standards Act (MQSA)	*32*	*6,123*	*30*	*5,293*	*31*	*6,249*	*31*	*6,377*	---	128
Field	502	95,732	515	92,509	515	98,256	531	102,566	16	4,310
Budget Authority	484	80,480	496	80,475	497	82,445	497	82,445	---	---
User Fees	18	15,252	19	12,034	18	15,811	34	20,121	16	4,310
Medical Device (MDUFA)	*10*	*1,913*	*11*	*1,949*	*10*	*2,199*	*11*	*2,328*	1	129
Mammography Quality Standards Act (MQSA)	*8*	*13,339*	*8*	*10,085*	*8*	*13,612*	*8*	*13,892*	---	280
International Courier	---	---	---	---	---	---	*15*	*3,901*	15	3,901
National Center for Toxicological Research (BA Only)	**287**	**63,331**	**276**	**63,312**	**276**	**63,331**	**276**	**60,277**	**---**	**-3,054**
Family Smoking Prevention and Tobacco Control Act	**699**	**531,527**	**708**	**554,469**	**882**	**564,117**	**960**	**596,338**	**78**	**32,221**
Center (UF Only)	610	515,640	671	544,999	812	547,454	880	581,438	68	33,984
Field (UF Only)	89	15,887	37	9,470	70	16,663	80	14,900	10	-1,763
FDA Headquarters	**1,134**	**277,453**	**1,104**	**261,099**	**1,167**	**289,562**	**1,200**	**298,682**	**33**	**9,120**
Budget Authority	***767***	***173,362***	***748***	***173,292***	***751***	***181,587***	***751***	***178,287***	---	-3,300
User Fees	***367***	***104,091***	***356***	***87,807***	***416***	***107,975***	***449***	***120,395***	***33***	***12,420***
Prescription Drug (PDUFA)	*185*	*48,639*	*175*	*45,300*	*212*	*52,139*	*211*	*52,763*	-1	624
Medical Device (MDUFA)	*31*	*6,733*	*28*	*6,770*	*30*	*6,259*	*31*	*7,101*	1	842
Generic Drug (GDUFA)	*80*	*24,205*	*67*	*18,150*	*80*	*24,690*	*80*	*25,133*	---	443
Biosimilars (BsUFA)	---	*1,321*	---	*178*	*5*	*1,354*	*5*	*1,388*	---	34
Animal Drug (ADUFA)	*4*	*898*	*3*	*937*	*4*	*913*	*4*	*919*	---	6
Animal Generic Drug (AGDUFA)	*1*	*277*	*1*	*318*	*1*	*388*	*1*	*415*	---	27
Family Smoking Prevention and Tobacco Control Act	*65*	*20,668*	*80*	*15,878*	*78*	*20,789*	*70*	*19,132*	-8	-1,657
Mammography Quality Standards Act (MQSA)	*1*	*243*	*2*	*276*	*2*	*248*	*2*	*253*	---	5
Food and Feed Recall	---	*75*	---	---	---	*75*	---	*75*	---	---
Food Reinspection	---	*480*	---	---	*2*	*480*	*2*	*480*	---	---
Voluntary Qualified Importer Program	---	*277*	---	---	*1*	*277*	*1*	*277*	---	---
Third Party Auditor Program	---	---	---	---	---	*73*	---	*73*	---	---
Outsourcing Facility	---	*275*	---	---	*1*	*290*	*1*	*302*	---	12
Food Facility Registration and Inspection	---	---	---	---	---	---	*13*	*4,662*	13	4,662
Food Import	---	---	---	---	---	---	*23*	*5,766*	23	5,766
International Courier	---	---	---	---	---	---	*1*	*313*	1	313
Cosmetics	---	---	---	---	---	---	*3*	*1,061*	3	1,061
Food Contact Substance Notification	---	---	---	---	---	---	*1*	*282*	1	282
FDA White Oak Consolidation	**---**	**47,116**	**---**	**46,687**	**---**	**52,346**	**---**	**47,461**	**---**	**-4,885**
Budget Authority	---	***43,044***	---	***43,044***	---	***48,044***	---	***43,044***	---	***-5,000***
Prescription Drug (PDUFA)	---	***4,072***	---	***3,643***	---	***4,302***	---	***4,417***	---	***115***

(Dollars in Thousands)	FY 2015 Final		FY 2015 Actuals		FY 2016 Enacted		FY 2017 President's Budget		FY 2017 +/- FY 2016	
	FTE	$000	FTE	$000	FTE	$000	FTE	$000	FTE	$000
Other Rent and Rent Related	---	**116,406**	---	**115,424**	---	**119,560**	---	**123,928**	---	**4,368**
Budget Authority	---	***72,943***	---	***72,943***	---	***73,484***	---	***71,943***	---	-1,541
User Fees	---	***43,463***	---	***42,481***	---	***46,076***	---	***51,985***	---	***5,909***
Prescription Drug (PDUFA)	---	*28,134*	---	*21,729*	---	*29,724*	---	*30,519*	---	795
Medical Device (MDUFA)	---	*4,027*	---	*4,354*	---	*4,558*	---	*4,425*	---	-133
Generic Drug (GDUFA)	---	*6,730*	---	*10,077*	---	*6,862*	---	*6,988*	---	126
Biosimilars (BsUFA)	---	*602*	---	*67*	---	*617*	---	*632*	---	15
Animal Drug (ADUFA)	---	*225*	---	*737*	---	*228*	---	*230*	---	2
Animal Generic Drug (AGDUFA)	---	*69*	---	*145*	---	*97*	---	*104*	---	7
Family Smoking Prevention and Tobacco Control Act	---	*3,233*	---	*5,372*	---	*3,502*	---	*6,250*	---	2,748
Food and Feed Recall	---	*43*	---	---	---	*43*	---	*43*	---	---
Food Reinspection	---	*204*	---	---	---	*204*	---	*204*	---	---
Voluntary Qualified Importer Program	---	*170*	---	---	---	*170*	---	*170*	---	---
Third Party Auditor Program	---	---	---	---	---	*45*	---	*45*	---	---
Outsourcing Facility	---	*26*	---	---	---	*26*	---	*26*	---	---
Food Facility Registration and Inspection	---	---	---	---	---	---	---	*843*	---	843
Food Import	---	---	---	---	---	---	---	*702*	---	702
International Courier	---	---	---	---	---	---	---	*192*	---	192
Cosmetics	---	---	---	---	---	---	---	*545*	---	545
Food Contact Substance Notification	---	---	---	---	---	---	---	*67*	---	67
GSA Rental Payments	---	**228,428**	---	**219,966**	---	**239,105**	---	**240,205**	---	**1,100**
Budget Authority	---	***168,882***	---	***168,882***	---	***176,683***	---	***170,208***	---	-6,475
User Fees	---	***59,546***	---	***51,084***	---	***62,422***	---	***69,997***	---	***7,575***
Prescription Drug (PDUFA)	---	*24,147*	---	*27,390*	---	*25,512*	---	*26,194*	---	682
Medical Device (MDUFA)	---	*7,058*	---	*1,280*	---	*7,978*	---	*7,743*	---	-235
Generic Drug (GDUFA)	---	*14,421*	---	*13,179*	---	*14,705*	---	*14,974*	---	269
Biosimilars (BsUFA)	---	*1,054*	---	*117*	---	*1,080*	---	*1,107*	---	27
Animal Drug (ADUFA)	---	*1,123*	---	*477*	---	*1,141*	---	*1,149*	---	8
Animal Generic Drug (AGDUFA)	---	*417*	---	*159*	---	*583*	---	*622*	---	39
Family Smoking Prevention and Tobacco Control Act	---	*10,572*	---	*8,482*	---	*10,592*	---	*13,280*	---	2,688
Food and Feed Recall	---	*73*	---	---	---	*73*	---	*73*	---	---
Food Reinspection	---	*348*	---	---	---	*348*	---	*348*	---	---
Voluntary Qualified Importer Program	---	*290*	---	---	---	*290*	---	*290*	---	---
Third Party Auditor Program	---	---	---	---	---	*77*	---	*77*	---	---
Outsourcing Facility	---	*43*	---	---	---	*43*	---	*43*	---	---
Food Facility Registration and Inspection	---	---	---	---	---	---	---	*1,495*	---	1,495
Food Import	---	---	---	---	---	---	---	*1,197*	---	1,197
International Courier	---	---	---	---	---	---	---	*332*	---	332
Cosmetics	---	---	---	---	---	---	---	*955*	---	955
Food Contact Substance Notification	---	---	---	---	---	---	---	*118*	---	118
Color Certification	**37**	**8,301**	**36**	**7,125**	**37**	**8,518**	**37**	**10,062**	---	**1,544**
Export Certification	**21**	**4,696**	**20**	**4,329**	**19**	**4,696**	**19**	**4,696**	---	---
Export Certification (proposed)	---	---	---	---	---	---	---	**4,280**	---	**4,280**
Priority Review Vouchers (PRV) Tropical Disease	---	---	---	---	---	---	---	---	---	---
Priority Review Vouchers (PRV) Pediatric Disease	---	**7,686**	---	---	---	**7,686**	---	**7,686**	---	---
Food and Drug Safety -- No Year (P.L. 113-6)	---	---	---	**11,925**	---	---	---	---	---	---
Food Safety	---	---	---	9,506	---	---	---	---	---	---
Drug Safety	---	---	---	2,419	---	---	---	---	---	---
Subtotal, Salaries and Expenses	**15,498**	**4,496,387**	**15,484**	**4,501,568**	**16,205**	**4,736,499**	**16,584**	**5,016,832**	**379**	**280,333**
Buildings and Facilities (Budget Authority)	---	**8,788**	---	**8,997**	---	**8,788**	---	**11,788**	---	**3,000**
Vice President's Cancer Moonshot (Directed Transfer)	---	---	---	---	---	---	**51**	**75,000**	**51**	**75,000**
Total Program Level	**15,498**	**4,505,175**	**15,484**	**4,510,565**	**16,205**	**4,745,287**	**16,635**	**5,103,620**	**430**	**358,333**
Non-Field Activities	10,691	3,055,416	10,708	3,108,653	11,200	3,201,087	11,447	3,330,239	247	129,152
Field Activities	4,807	1,049,021	4,776	998,913	5,005	1,124,401	5,137	1,274,999	132	150,598
White Oak, Rent Activities, and B&F	---	400,738	---	391,074	---	419,799	---	423,382	---	3,583
Food and Drug Safety -- No Year	---	---	---	11,925	---	---	---	---	---	---
Vice President's Cancer Moonshot (Directed Transfer)	---	---	---	---	---	---	51	75,000	51	75,000

(Dollars in Thousands)	FY 2015 Final		FY 2015 Actuals		FY 2016 Enacted		FY 2017 President's Budget		FY 2017 +/- FY 2016	
	FTE	$000	FTE	$000	FTE	$000	FTE	$000	FTE	$000
User Fees:										
Current Law										
Prescription Drug (PDUFA)	2,970	798,000	2,888	796,066	3,100	851,481	3,103	865,653	3	14,172
Medical Device (MDUFA)	500	128,282	588	130,517	513	137,677	549	144,859	36	7,182
Generic Drug (GDUFA)	921	312,116	885	332,080	921	318,363	921	324,085	---	5,722
Biosimilars (BsUFA)	5	21,014	5	2,267	72	21,540	72	22,079	---	539
Animal Drug (ADUFA)	89	22,464	89	21,539	91	22,818	91	22,977	---	159
Animal Generic Drug (AGDUFA)	32	6,944	32	8,694	30	9,705	30	10,367	---	662
Family Smoking Prevention and Tobacco Control Act	764	566,000	788	584,201	960	599,000	1,030	635,000	70	36,000
Indefinite										
Mammography Quality Standards Act (MQSA)	41	19,705	40	15,654	41	20,109	41	20,522	---	413
Color Certification	37	8,301	36	7,125	37	8,518	37	10,062	---	1,544
Export Certification	21	4,696	20	4,329	19	4,696	19	4,696	---	---
Priority Review Vouchers (PRV) Tropical Disease	---	---	---	---	---	---	---	---	---	---
Priority Review Vouchers (PRV) Pediatric Disease	---	7,686	---	---	---	7,686	---	7,686	---	---
Food and Feed Recall	---	1,434	---	---	5	1,434	5	1,434	---	---
Food Reinspection	---	6,414	---	---	24	6,414	24	6,414	---	---
Voluntary Qualified Importer Program	---	5,300	---	---	20	5,300	20	5,300	---	---
Third Party Auditor Program	---	---	---	---	6	1,400	6	1,400	---	---
Outsourcing Facility	---	995	2	396	3	1,050	3	1,092	---	42
Subtotal, Indefinite	**99**	**54,531**	**98**	**27,504**	**155**	**56,607**	**155**	**58,606**	**---**	**1,999**
Subtotal, Current Law Including Indefinite	**5,380**	**1,909,351**	**5,373**	**1,902,868**	**5,842**	**2,017,191**	**5,951**	**2,083,626**	**109**	**66,435**
Proposed										
Export Certification	---	---	---	---	---	---	---	4,280	---	4,280
Food Facility Registration and Inspection	---	---	---	---	---	---	69	61,252	69	61,252
Food Import	---	---	---	---	---	---	81	105,289	81	105,289
International Courier	---	---	---	---	---	---	21	6,038	21	6,038
Cosmetics	---	---	---	---	---	---	63	20,230	63	20,230
Food Contact Substance Notification	---	---	---	---	---	---	8	5,193	8	5,193
Subtotal, Proposed	---	---	---	---	---	---	**242**	**202,282**	**242**	**202,282**
Total User Fees	**5,380**	**1,909,351**	**5,373**	**1,902,868**	**5,842**	**2,017,191**	**6,193**	**2,285,908**	**351**	**268,717**
Total Budget Authority	**10,118**	**2,595,824**	**10,111**	**2,607,697**	**10,363**	**2,728,096**	**10,391**	**2,742,712**	**28**	**14,616**
BA, S&E	***10,118***	***2,587,036***	***10,111***	***2,598,700***	***10,363***	***2,719,308***	***10,391***	***2,730,924***	***28***	***11,616***
BA, B&F	---	***8,788***	---	***8,997***	---	***8,788***	---	***11,788***	---	***3,000***
Total Mandatory Resources - Directed Transfer	---	---	---	---	---	---	**51**	**75,000**	**51**	**75,000**
Total Program Level	**15,498**	**4,505,175**	**15,484**	**4,510,565**	**16,205**	**4,745,287**	**16,635**	**5,103,620**	**430**	**358,333**

* FY 2015 Enacted level is $12.5 million lower than the fee collections estimated in FDA's FY 2015 User Fee Federal Register notices.

** The FY 2015 Final and FY 2016 Enacted reflect the transfer of $1.5 million from FDA Headquarters to the HHS Office of Inspector General to support oversight of FDA's expanded authorities.

*** In addition to the funding displayed in the table above, the FY 2015 Enacted level includes $25 million in emergency funding for FDA's role in the U.S. Government response to contain, treat, and prevent the spread of Ebola. The FY 2015 Actuals total does not include 20 FTE and $11.3 million for the emergency Ebola fund.

**** FTE figures do not include an estimated 85 reimbursable, 1 CRADA, 2 FOIA, and 28 PEPFAR .

***** Export Certification funding displayed under Proposed User fees reflects FDA's legislative proposal to increase the statutory maximum for this fee in FY 2017.

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MAJOR ACTIVITIES TABLE

(Dollars in Thousands)	FY 2015 Final						FY 2016 Enacted						FY 2017 President's Budget						FY 2017 President's Budget +/- FY 2016 Enacted					
	Food Safety		Medical Product Safety and Availability		Total		Food Safety		Medical Product Safety and Availability		Total		Food Safety		Medical Product Safety and Availability		Total		Food Safety		Medical Product Safety and Availability		Total	
Programs	**FTE**	**$000**	**FTE**	**$000**	**FTE**	**$000**	**FTE**	**$000**	**FTE**	**$000**	**FTE**	**$000**	**FTE**	**$000**	**FTE**	**$000**	**FTE**	**$000**	**FTE**	**$000**	**FTE**	**$000**	**FTE**	**$000**
Budget Authority:																								
Foods	**3,667**	**903,403**	---	---	**3,667**	**903,403**	**3,876**	**987,328**	---	---	**3,876**	**987,328**	**3,890**	**1,012,603**	---	---	**3,890**	**1,012,603**	**14**	**25,275**	---	---	**14**	**25,275**
Center	961	279,994	---	---	961	279,994	1,069	303,994	---	---	1,069	303,994	1,069	303,994	---	---	1,069	303,994	---	---	---	---	---	---
Field	2,706	623,409	---	---	2,706	623,409	2,807	683,334	---	---	2,807	683,334	2,821	708,609	---	---	2,821	708,609	14	25,275	---	---	14	25,275
Human Drugs	---	---	**2,177**	**482,287**	**2,177**	**482,287**	---	---	**2,179**	**491,503**	**2,179**	**491,503**	---	---	**2,181**	**491,503**	**2,181**	**491,503**	---	---	**2**	---	**2**	---
Center	---	---	1,411	346,080	1,411	346,080	---	---	1,413	355,296	1,413	355,296	---	---	1,414	354,856	1,414	354,856	---	---	1	-440	1	-440
Field	---	---	766	136,207	766	136,207	---	---	766	136,207	766	136,207	---	---	767	136,647	767	136,647	---	---	1	440	1	440
Biologics	---	---	**846**	**211,382**	**846**	**211,382**	---	---	**851**	**215,443**	**851**	**215,443**	---	---	**851**	**215,443**	**851**	**215,443**	---	---	---	---	---	---
Center	---	---	621	171,096	621	171,096	---	---	625	174,052	625	174,052	---	---	625	174,052	625	174,052	---	---	---	---	---	---
Field	---	---	225	40,286	225	40,286	---	---	226	41,391	226	41,391	---	---	226	41,391	226	41,391	---	---	---	---	---	---
Animal Drugs and Feeds	**608**	**112,730**	**155**	**34,847**	**763**	**147,577**	**636**	**125,305**	**155**	**33,347**	**791**	**158,652**	**636**	**125,305**	**164**	**36,547**	**800**	**161,852**	---	---	**9**	**3,200**	**9**	**3,200**
Center	308	61,549	139	31,956	447	93,505	318	63,549	139	30,456	457	94,005	318	63,549	148	33,656	466	97,205	---	---	9	3,200	9	3,200
Field	300	51,181	16	2,891	316	54,072	318	61,756	16	2,891	334	64,647	318	61,756	16	2,891	334	64,647	---	---	---	---	---	---
Devices and Radiological Health	---	---	**1,634**	**320,825**	**1,634**	**320,825**	---	---	**1,639**	**323,253**	**1,639**	**323,253**	---	---	**1,642**	**325,764**	**1,642**	**325,764**	---	---	**3**	**2,511**	**3**	**2,511**
Center	---	---	1,138	240,345	1,138	240,345	---	---	1,142	240,808	1,142	240,808	---	---	1,145	243,319	1,145	243,319	---	---	3	2,511	3	2,511
Field	---	---	496	80,480	496	80,480	---	---	497	82,445	497	82,445	---	---	497	82,445	497	82,445	---	---	---	---	---	---
National Center for Toxicological Research	**45**	**10,233**	**231**	**53,098**	**276**	**63,331**	**45**	**10,233**	**231**	**53,098**	**276**	**63,331**	**45**	**7,179**	**231**	**53,098**	**276**	**60,277**	---	**-3,054**	---	---	---	**-3,054**
FDA Headquarters	**325**	**73,285**	**423**	**90,077**	**748**	**173,362**	**328**	**77,212**	**423**	**89,375**	**751**	**181,587**	**328**	**77,212**	**423**	**91,075**	**751**	**178,287**	---	---	---	**1,700**	---	**-3,300**
FDA White Oak Consolidation	---	---	---	---	---	**43,044**	---	---	---	---	---	**48,044**	---	---	---	---	---	**43,044**	---	---	---	---	---	**-5,000**
Other Rent and Rent Related	---	**36,682**	---	**36,261**	---	**72,943**	---	**37,078**	---	**36,406**	---	**73,484**	---	**36,300**	---	**35,643**	---	**71,943**	---	**-778**	---	**-763**	---	**-1,541**
GSA Rental Payments	---	**78,145**	---	**90,737**	---	**168,882**	---	**82,500**	---	**94,183**	---	**176,683**	---	**79,477**	---	**90,731**	---	**170,208**	---	**-3,023**	---	**-3,452**	---	**-6,475**
SUBTOTAL, BA Salaries and Expenses	**4,645**	**1,214,478**	**5,466**	**1,319,514**	**10,111**	**2,587,036**	**4,885**	**1,319,656**	**5,478**	**1,336,608**	**10,363**	**2,719,308**	**4,899**	**1,338,076**	**5,492**	**1,339,804**	**10,391**	**2,730,924**	**14**	**18,420**	**14**	**3,196**	**28**	**11,616**
Building and Facilities	---	---	---	---	---	**8,788**	---	---	---	---	---	**8,788**	---	---	---	---	---	**11,788**	---	---	---	---	---	**3,000**
Total BA	**4,645**	**1,214,478**	**5,466**	**1,319,514**	**10,111**	**2,595,824**	**4,885**	**1,319,656**	**5,478**	**1,336,608**	**10,363**	**2,728,096**	**4,899**	**1,338,076**	**5,492**	**1,339,804**	**10,391**	**2,742,712**	**14**	**18,420**	**14**	**3,196**	**28**	**14,616**

(Dollars in Thousands)	FY 2015 Final						FY 2016 Enacted						FY 2017 President's Budget						FY 2017 President's Budget +/- FY 2016 Enacted					
	Food Safety		Medical Product Safety and Availability		Total		Food Safety		Medical Product Safety and Availability		Total		Food Safety		Medical Product Safety and Availability		Total		Food Safety		Medical Product Safety and Availability		Total	
Programs	**FTE**	**$000**	**FTE**	**$000**	**FTE**	**$000**	**FTE**	**$000**	**FTE**	**$000**	**FTE**	**$000**	**FTE**	**$000**	**FTE**	**$000**	**FTE**	**$000**	**FTE**	**$000**	**FTE**	**$000**	**FTE**	**$000**
Total User Fees	---	**14,415**	**4,549**	**1,320,635**	**5,373**	**1,909,351**	**55**	**16,551**	**4,790**	**1,393,122**	**5,842**	**2,017,191**	**279**	**209,767**	**4,847**	**1,431,079**	**6,193**	**2,285,908**	**224**	**193,216**	**57**	**37,957**	**351**	**268,717**
Current Law																								
Prescription Drug (PDUFA)	---	---	2,888	798,000	2,888	798,000	---	---	3,100	851,481	3,100	851,481	---	---	3,103	865,653	3,103	865,653	---	---	3	14,172	3	14,172
Medical Device (MDUFA)	---	---	588	128,282	588	128,282	---	---	513	137,677	513	137,677	---	---	549	144,859	549	144,859	---	---	36	7,182	36	7,182
Generic Drug (GDUFA)	---	---	885	312,116	885	312,116	---	---	921	318,363	921	318,363	---	---	921	324,085	921	324,085	---	---	---	5,722	---	5,722
Biosimilars (BsUFA)	---	---	5	21,014	5	21,014	---	---	72	21,540	72	21,540	---	---	72	22,079	72	22,079	---	---	---	539	---	539
Animal Drug (ADUFA)	---	---	89	22,464	89	22,464	---	---	91	22,818	91	22,818	---	---	91	22,977	91	22,977	---	---	---	159	---	159
Animal Generic Drug (AGDUFA)	---	---	32	6,944	32	6,944	---	---	30	9,705	30	9,705	---	---	30	10,367	30	10,367	---	---	---	662	---	662
Family Smoking Prevention and Tobacco Control Act.	---	---	---	---	788	566,000	---	---	---	---	960	599,000	---	---	---	---	1,030	635,000	---	---	---	---	70	36,000
Mammography Quality Standards Act (MQSA)	---	---	40	19,705	40	19,705	---	---	41	20,109	41	20,109	---	---	41	20,522	41	20,522	---	---	---	413	---	413
Color Certification	---	---	---	---	36	8,301	---	---	---	---	37	8,518	---	---	---	---	37	10,062	---	---	---	---	---	1,544
Export Certification	---	1,267	20	3,429	20	4,696	---	2,003	19	2,693	19	4,696	---	2,003	19	2,693	19	4,696	---	---	---	---	---	---
Priority Review Vouchers (PRV) Tropical Disease	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Priority Review Vouchers (PRV) Pediatric Disease	---	---	---	7,686	---	7,686	---	---	---	7,686	---	7,686	---	---	---	7,686	---	7,686	---	---	---	---	---	---
Food and Feed Recall	---	1,434	---	---	---	1,434	5	1,434	---	---	5	1,434	5	1,434	---	---	5	1,434	---	---	---	---	---	---
Food Reinspection	---	6,414	---	---	---	6,414	24	6,414	---	---	24	6,414	24	6,414	---	---	24	6,414	---	---	---	---	---	---
Voluntary Qualified Importer Program	---	5,300	---	---	---	5,300	20	5,300	---	---	20	5,300	20	5,300	---	---	20	5,300	---	---	---	---	---	---
Third Party Auditor Program	---	---	---	---	---	---	6	1,400	---	---	6	1,400	6	1,400	---	---	6	1,400	---	---	---	---	---	---
Outsourcing Facility	---	---	2	995	2	995	---	---	3	1,050	3	1,050	---	---	3	1,092	3	1,092	---	---	---	42	---	42
Proposed																								
Export Certification	---	---	---	---	---	---							---	---	---	4,280	---	4,280	---	---	---	4,280	---	4,280
Food Facility Registration and Inspection	---	---	---	---	---	---	---	---	---	---	---	---	69	61,252	---	---	69	61,252	69	61,252	---	---	69	61,252
Food Import	---	---	---	---	---	---	---	---	---	---	---	---	81	105,289	---	---	81	105,289	81	105,289	---	---	81	105,289
International Courier	---	---	---	---	---	---	---	---	---	---	---	---	3	1,252	18	4,786	21	6,038	3	1,252	18	4,786	21	6,038
Cosmetics	---	---	---	---	---	---	---	---	---	---	---	---	63	20,230	---	---	63	20,230	63	20,230	---	---	63	20,230
Food Contact Substance Notification	---	---	---	---	---	---	---	---	---	---	---	---	8	5,193	---	---	8	5,193	8	5,193	---	---	8	5,193
Total Mandatory Resources - Directed Transfer															**51**	**75,000**	**51**	**75,000**			**51**	**75,000**	**51**	**75,000**
Total Program Level	**4,645**	**1,228,893**	**10,015**	**2,640,149**	**15,484**	**4,505,175**	**4,940**	**1,336,207**	**10,268**	**2,729,730**	**16,205**	**4,745,287**	**5,178**	**1,547,843**	**10,390**	**2,845,883**	**16,635**	**5,103,620**	**238**	**211,636**	**122**	**116,153**	**430**	**358,333**

* Total Budget Authority includes $10 million for the China Initiative and $5 million for Foreign High Risk Inspections. FDA White Oak Consolidation, Building and Facilities Account, Family Smoking Prevention and Tobacco Control Act, and Color Certification User Fees are not included in Food Safety and Nutrition and Medical Product Safety and Availability activities. Medical Countermeasures are included in Medical Product Safety and Availability activities.

** ADUFA and AGDUFA are currently included in Medical Product Safety and Availability. However, ADUFA and AGDUFA also support drug review for food producing animals.

*** FY 2015 Enacted Level is $12.5 million lower for user fees in total than the fee collections estimated in FDA's FY 2015 User Fee Federal Register notices.

**** The FY 2015 Final and FY 2016 Enacted reflect the transfer of $1.5 million from FDA Headquarters to the HHS Office of Inspector General to support oversight of FDA's expanded authorities.

***** In addition to the funding displayed in the table above, the FY 2015 Operating level includes $25 million in emergency funding for FDA's role in the U.S. Government response to contain, treat, and prevent the spread of Ebola.

****** FTE figures do not include an estimated 85 reimbursable, 1 CRADA, 2 FOIA, and 28 PEPFAR.

*******Export Certification funding displayed under Proposed User fees reflects FDA's legislative proposal to increase the statutory maximum for this fee in FY 2017.

FY 2015 BUDGET AUTHORITY CROSSWALK

(Dollars in Thousands)	FY 2014 Enacted		Program Changes[1] and FTE Annualization		Increases																	
					Food Safety		Medical Product Safety										Total Increase		Total Changes		FY 2015 Final[2]	
							Antimicrobial Resistance[3]		Pharmacy Compounding		Drug Inspections		Counterfeit Drugs		Medical Product Safety Sub-Total							
	FTE	$000	FTE	$000	FTE	$000	FTE	$000	FTE	$000	FTE	$000	FTE	$000	FTE	$000	FTE	$000	FTE	$000	FTE	$000
Salaries and Expenses Account:																						
Foods	**3,650**	**882,817**	**-1**	**---**	**18**	**20,586**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**18**	**20,586**	**17**	**20,586**	**3,667**	**903,403**
Center	943	266,408	---	---	18	13,586	---	---	---	---	---	---	---	---	---	---	18	13,586	18	13,586	961	279,994
Field	2,707	616,409	-1	---	---	7,000	---	---	---	---	---	---	---	---	---	---	---	7,000	-1	7,000	2,706	623,409
Human Drugs	**2,076**	**466,374**	**25**	**---**	**---**	**---**	**---**	**---**	**67**	**9,368**	**---**	**2,000**	**9**	**4,545**	**76**	**15,913**	**76**	**15,913**	**101**	**15,913**	**2,177**	**482,287**
Center	1,361	339,838	12	---	---	---	---	---	37	5,882	---	---	1	360	38	6,242	38	6,242	50	6,242	1,411	346,080
Field	715	126,536	13	---	---	---	---	---	30	3,486	---	2,000	8	4,185	38	9,671	38	9,671	51	9,671	766	136,207
Biologics	**835**	**210,928**	**9**	**---**	**---**	**---**	**---**	**---**	**2**	**454**	**---**	**---**	**---**	**---**	**2**	**454**	**2**	**454**	**11**	**454**	**846**	**211,382**
Center	616	170,744	4	---	---	---	---	---	1	352	---	---	---	---	1	352	1	352	5	352	621	171,096
Field	219	40,184	5	---	---	---	---	---	1	102	---	---	---	---	1	102	1	102	6	102	225	40,286
Animal Drugs and Feeds	**727**	**141,566**	**28**	**---**	**---**	**---**	**1**	**3,977**	**7**	**2,034**	**---**	**---**	**---**	**---**	**8**	**6,011**	**8**	**6,011**	**36**	**6,011**	**763**	**147,577**
Center	417	87,846	23	---	---	---	1	3,977	6	1,682	---	---	---	---	7	5,659	7	5,659	30	5,659	447	93,505
Field	310	53,720	5	---	---	---	---	---	1	352	---	---	---	---	1	352	1	352	6	352	316	54,072
Devices and Radiological Health	**1,620**	**320,825**	**14**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**14**	**---**	**1,634**	**320,825**
Center	1,136	240,345	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	2	---	1,138	240,345
Field	484	80,480	12	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	12	---	496	80,480
National Center for Toxicological Research	**286**	**62,494**	**-10**	**837**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**-10**	**837**	**276**	**63,331**
FDA Headquarters	**748**	**172,107**	**-16**	**-3,449**	**2**	**2,954**	**---**	**---**	**13**	**1,475**	**---**	**---**	**1**	**275**	**14**	**1,750**	**16**	**4,704**	**---**	**1,255**	**748**	**173,362**
FDA White Oak Consolidation	**---**	**58,044**	**---**	**-15,000**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**-15,000**	**---**	**43,044**
Other Rent and Rent Related	**---**	**74,674**	**---**	**-2,289**	**---**	**179**	**---**	**---**	**---**	**379**	**---**	**---**	**---**	**---**	**---**	**379**	**---**	**558**	**---**	**-1,731**	**---**	**72,943**
GSA Rental Payments	**---**	**162,076**	**---**	**2,712**	**---**	**2,804**	**---**	**---**	**---**	**1,290**	**---**	**---**	**---**	**---**	**---**	**1,290**	**---**	**4,094**	**---**	**6,806**	**---**	**168,882**
Subtotal, Salaries and Expenses Account	**9,942**	**2,551,905**	**49**	**-17,189**	**20**	**26,523**	**1**	**3,977**	**89**	**15,000**	**---**	**2,000**	**10**	**4,820**	**100**	**25,797**	**120**	**52,320**	**169**	**35,131**	**10,111**	**2,587,036**
Buildings and Facilities Account	**---**	**8,788**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**8,788**
Total Budget Authority	**9,942**	**2,560,693**	**49**	**-17,189**	**20**	**26,523**	**1**	**3,977**	**89**	**15,000**	**---**	**2,000**	**10**	**4,820**	**100**	**25,797**	**120**	**52,320**	**169**	**35,131**	**10,111**	**2,595,824**
Non-Field Activities	**5,507**	**1,339,782**	**15**	**-2,612**	**20**	**16,540**	**1**	**3,977**	**57**	**9,391**	**---**	**---**	**2**	**635**	**60**	**14,003**	**80**	**30,543**	**95**	**27,931**	**5,602**	**1,367,713**
Field Activities	**4,435**	**917,329**	**34**	**---**	**---**	**7,000**	**---**	**---**	**32**	**3,940**	**---**	**2,000**	**8**	**4,185**	**40**	**10,125**	**40**	**17,125**	**74**	**17,125**	**4,509**	**934,454**
Rent Activities, B&F, and White Oak	**---**	**303,582**	**---**	**-14,577**	**---**	**2,983**	**---**	**---**	**---**	**1,669**	**---**	**---**	**---**	**---**	**---**	**1,669**	**---**	**4,652**	**---**	**-9,925**	**---**	**293,657**

[1] In the Major Activities Table: -$2.3 million of ORRR and $2.7 million of GSA Rent are associated with Medical Product Safety.

[2] FY 2015 Final reflects the transfer of $1.5 million from FDA Headquarters to the HHS Office of Inspector General to support oversight of FDA's expanded authorities. In the Major Activities Table: -$2.3 million of ORRR and $2.7 million of GSA Rent are associated with Medical Product Safety.

[3] FY 2015 increase of $977K / 1 FTE in Animal Drugs and Feeds program for antimicrobial resistance re-aligned to medical product safety.

FY 2016 BUDGET AUTHORITY CROSSWALK

(Dollars in Thousands)	FY 2015 Final[1]		Pay Inflation Cost (non-add)	Reductions and Program Changes[2]		Increases																		Total Changes		FY 2016 Enacted	
						Rent and Infrastructure[3]		Foreign High Risk Inspections		Food Safety		Medical Product Safety												Total Increase					
												FDASIA Implementation		Combating Antibiotic Resistant Bacteria		Precision Medicine		Orphan Product Development Grants Program		Sunscreen		Medical Product Safety Sub-Total							
	FTE	$000	$000	FTE	$000	FTE	$000	FTE	$000	FTE	$000	FTE	$000	FTE	$000	FTE	$000	FTE	$000	FTE	$000	FTE	$000	FTE	$000	FTE	$000	FTE	$000
Salaries and Expenses Account:																													
Foods	**3,667**	**903,403**	**-6,310**	**71**	---	---	---	---	---	**138**	**83,925**	---	---	---	---	---	---	---	---	---	---	---	---	**138**	**83,925**	**209**	**83,925**	**3,876**	**987,328**
Center	961	279,994	-1,782	71	---	---	---	---	---	37	24,000	---	---	---	---	---	---	---	---	---	---	---	---	37	24,000	108	24,000	1,069	303,994
Field	2,706	623,409	-4,528	---	---	---	---	---	---	101	59,925	---	---	---	---	---	---	---	---	---	---	---	---	101	59,925	101	59,925	2,807	683,334
Human Drugs	**2,177**	**482,287**	**-3,645**	---	---	---	---	---	---	---	---	---	---	**2**	**6,000**	---	---	---	**2,500**	---	**716**	**2**	**9,216**	**2**	**9,216**	**2**	**9,216**	**2,179**	**491,503**
Center	1,411	346,080	-2,363	---	---	---	---	---	---	---	---	---	---	2	6,000	---	---	---	2,500	---	716	2	9,216	2	9,216	2	9,216	1,413	355,296
Field	766	136,207	-1,282	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	766	136,207
Biologics	**846**	**211,382**	**-1,417**	**-5**	**-1,206**	---	---	---	---	---	---	**4**	**3,035**	**6**	**2,232**	---	---	---	---	---	---	**10**	**5,267**	**10**	**5,267**	**5**	**4,061**	**851**	**215,443**
Center	621	171,096	-1,040	-5	-1,206	---	---	---	---	---	---	3	1,930	6	2,232	---	---	---	---	---	---	9	4,162	9	4,162	4	2,956	625	174,052
Field	225	40,286	-377	---	---	---	---	---	---	---	---	1	1,105	---	---	---	---	---	---	---	---	1	1,105	1	1,105	1	1,105	226	41,391
Animal Drugs and Feeds	**763**	**147,577**	**-1,278**	---	**-3,000**	---	---	---	---	**28**	**14,075**	---	---	---	---	---	---	---	---	---	---	---	---	**28**	**14,075**	**28**	**11,075**	**791**	**158,652**
Center	447	93,505	-749	---	-3,000	---	---	---	---	10	3,500	---	---	---	---	---	---	---	---	---	---	---	---	10	3,500	10	500	457	94,005
Field	316	54,072	-529	---	---	---	---	---	---	18	10,575	---	---	---	---	---	---	---	---	---	---	---	---	18	10,575	18	10,575	334	64,647
Devices and Radiological Health	**1,634**	**320,825**	**-2,736**	---	**-2,037**	---	---	---	---	---	---	**1**	**1,965**	---	**500**	**4**	**2,000**	---	---	---	---	**5**	**4,465**	**5**	**4,465**	**5**	**2,428**	**1,639**	**323,253**
Center	1,138	240,345	-1,906	---	-2,037	---	---	---	---	---	---	---	---	---	500	4	2,000	---	---	---	---	4	2,500	4	2,500	4	463	1,142	240,808
Field	496	80,480	-830	---	---	---	---	---	---	---	---	1	1,965	---	---	---	---	---	---	---	---	1	1,965	1	1,965	1	1,965	497	82,445
National Center for Toxicological Research	**276**	**63,331**	-462	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**276**	**63,331**
FDA Headquarters	**748**	**173,362**	-1,252	---	**-1,273**	---	---	---	**5,000**	**3**	**4,498**	---	---	---	---	---	---	---	---	---	---	---	---	**3**	**9,498**	**3**	**8,225**	**751**	**181,587**
FDA White Oak Consolidation	---	**43,044**	---	---	---	---	**5,000**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**5,000**	---	**5,000**	---	**48,044**
Other Rent and Rent Related	---	**72,943**	---	---	---	---	---	---	---	---	**396**	---	---	---	---	---	**145**	---	---	---	---	---	**145**	---	**541**	---	**541**	---	**73,484**
GSA Rental Payments	---	**168,882**	---	---	---	---	**5,954**	---	---	---	**1,600**	---	---	---	---	---	**247**	---	---	---	---	---	**247**	---	**7,801**	---	**7,801**	---	**176,683**
Subtotal, Salaries and Expenses Account	**10,111**	**2,587,036**	**-17,100**	**66**	**-7,516**	---	**10,954**	---	**5,000**	**169**	**104,494**	**5**	**5,000**	**8**	**8,732**	**4**	**2,392**	---	**2,500**	---	**716**	**17**	**19,340**	**186**	**139,788**	**252**	**132,272**	**10,363**	**2,719,308**
Buildings and Facilities Account	---	**8,788**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**8,788**
Total Budget Authority	**10,111**	**2,595,824**	**-17,100**	**66**	**-7,516**	---	**10,954**	---	**5,000**	**169**	**104,494**	**5**	**5,000**	**8**	**8,732**	**4**	**2,392**	---	**2,500**	---	**716**	**17**	**19,340**	**186**	**139,788**	**252**	**132,272**	**10,363**	**2,728,096**
Non-Field Activities	**5,602**	**1,367,713**	**-9,554**	**66**	**-7,516**	---	---	---	**5,000**	**50**	**31,998**	**3**	**1,930**	**8**	**8,732**	**4**	**2,000**	---	**2,500**	---	**716**	**15**	**15,878**	**65**	**52,876**	**131**	**45,360**	**5,733**	**1,413,073**
Field Activities	**4,509**	**934,454**	**-7,546**	---	---	---	---	---	---	**119**	**70,500**	**2**	**3,070**	---	---	---	---	---	---	---	---	**2**	**3,070**	**121**	**73,570**	**121**	**73,570**	**4,630**	**1,008,024**
Rent Activities, B&F, and White Oak	---	**293,657**	---	---	---	---	**10,954**	---	---	---	**1,996**	---	---	---	---	---	**392**	---	---	---	---	---	**392**	---	**13,342**	---	**13,342**	---	**306,999**

[1]The FY 2015 Final and FY 2016 Enacted reflect the transfer of $1.5 million from FDA Headquarters to the HHS Office of Inspector General to support oversight of FDA's expanded authorities. The FY 2015 Enacted reflect actual FTE and enacted dollars.

[2]Includes an additional 71 FTE due to Center resource realignment to support FSMA implementation and other mandates.

[3]In the Major Activities Table: $2.755 million of GSA Rent is associated with Food Safety; and $3.199 million of GSA Rent is associated with Medical Product Safety.

FY 2017 BUDGET AUTHORITY CROSSWALK

(Dollars in Thousands)	FY 2016 Enacted[1]		Pay Inflation Cost (non-add)	Reductions and Program Changes[2]		Foreign High Risk Inspections		Total Reductions and Program Changes		Increases																				FY 2017 President's Budget	
											Food Safety							Medical Product Safety and Availability										Total Increase		Total Changes		
										Rent and Infrastructure	National Integrated Food Safety System		Import Safety		Sub-Total FSMA Implementation			Supporting Animal Drug and Medical Device Review		Precision Medicine		Pharmacy Compounding		Combating Antibiotic Resistant Bacteria		Sub-Total Medical Product Safety and Availability						
	FTE[3]	$000	$000	FTE	$000	FTE	$000	FTE	$000	$000	FTE	$000	FTE	$000	FTE	$000	FTE	$000	FTE	$000	FTE	$000	FTE	$000	FTE	$000	FTE	$000	FTE	$000	FTE	$000
Salaries and Expenses Account:																																
Foods	**3,876**	**987,328**	**-7,219**	---	---	---	---	---	---	---	**9**	**11,262**	**5**	**14,013**	**14**	**25,275**	---	---	---	---	---	---	---	---	---	---	---	**14**	**25,275**	**14**	**25,275**	**3,890**	**1,012,603**
Center	1,069	303,994	-2,102	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1,069	303,994
Field	2,807	683,334	-5,117	---	---	---	---	---	---	---	9	11,262	5	14,013	14	25,275	---	---	---	---	---	---	---	---	---	---	---	14	25,275	14	25,275	2,821	708,609
Human Drugs	**2,179**	**491,503**	**-3,926**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**2**	**1,000**	---	**-1,000**	**2**	---	**2**	---	**2**	---	**2,181**	**491,503**
Center	1,413	355,296	-2,554	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1	560	---	-1,000	1	-440	1	-440	1	-440	1,414	354,856
Field	766	136,207	-1,372	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1	440	---	---	1	440	1	440	1	440	767	136,647
Biologics	**851**	**215,443**	**-1,535**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**851**	**215,443**
Center	625	174,052	-1,132	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	625	174,052
Field	226	41,391	-403	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	226	41,391
Animal Drugs and Feeds	**791**	**158,652**	**-1,403**	---	---	---	---	---	---	---	---	---	---	---	---	---	**8**	**2,200**	---	---	---	---	**1**	**1,000**	**9**	**3,200**	**9**	**3,200**	**9**	**3,200**	**800**	**161,852**
Center	457	94,005	-804	---	---	---	---	---	---	---	---	---	---	---	---	---	8	2,200	---	---	---	---	1	1,000	9	3,200	9	3,200	9	3,200	466	97,205
Field	334	64,647	-599	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	334	64,647
Devices and Radiological Health	**1,639**	**323,253**	**-2,980**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**711**	**3**	**1,800**	---	---	---	---	**3**	**2,511**	**3**	**2,511**	**3**	**2,511**	**1,642**	**325,764**
Center	1,142	240,808	-2,096	---	---	---	---	---	---	---	---	---	---	---	---	---	---	711	3	1,800	---	---	---	---	3	2,511	3	2,511	3	2,511	1,145	243,319
Field	497	82,445	-884	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	497	82,445
National Center for Toxicological Research	**276**	**63,331**	**-523**	---	**-3,054**	---	---	---	**-3,054**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**276**	**60,277**
FDA Headquarters	**751**	**181,587**	**-1,410**	---	**1,500**	---	**-5,000**	---	**-3,500**	---	---	---	---	---	---	---	---	---	---	---	---	**200**	---	---	---	200	---	**200**	---	**-3,300**	**751**	**178,287**
FDA White Oak Consolidation	---	**48,044**	---	---	**-5,000**	---	---	---	**-5,000**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**-5,000**	---	**43,044**
Other Rent and Rent Related	---	**73,484**	---	---	**-1,541**	---	---	---	**-1,541**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**-1,541**	---	**71,943**
GSA Rental Payments	---	**176,683**	---	---	**-6,475**	---	---	---	**-6,475**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**-6,475**	---	**170,208**
Subtotal, Salaries and Expenses Account	**10,363**	**2,719,308**	**-18,996**	---	**-14,570**	---	**-5,000**	---	**-19,570**	---	**9**	**11,262**	**5**	**14,013**	**14**	**25,275**	**8**	**2,911**	**3**	**2,000**	**2**	**1,000**	**1**	---	**14**	**5,911**	**28**	**31,186**	**28**	**11,616**	**10,391**	**2,730,924**
Buildings and Facilities Account	---	**8,788**	---	---	---	---	---	---	---	**3,000**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**3,000**	---	**3,000**	---	**11,788**
Total Budget Authority	**10,363**	**2,728,096**	**-18,996**	---	**-14,570**	---	**-5,000**	---	**-19,570**	**3,000**	**9**	**11,262**	**5**	**14,013**	**14**	**25,275**	**8**	**2,911**	**3**	**2,000**	**2**	**1,000**	**1**	---	**14**	**5,911**	**28**	**34,186**	**28**	**14,616**	**10,391**	**2,742,712**
Non-Field Activities	**5,733**	**1,413,073**	**-10,621**	---	**-1,554**	---	**-5,000**	---	**-6,554**	---	---	---	---	---	---	---	**8**	**2,911**	**3**	**2,000**	**1**	**560**	**1**	---	**13**	**5,471**	**13**	**5,471**	**13**	**-1,083**	**5,746**	**1,411,990**
Field Activities	**4,630**	**1,008,024**	**-8,375**	---	---	---	---	---	---	---	**9**	**11,262**	**5**	**14,013**	**14**	**25,275**	---	---	---	---	**1**	**440**	---	---	**1**	**440**	**15**	**25,715**	**15**	**25,715**	**4,645**	**1,033,739**
Rent Activities, B&F, and White Oak	---	**306,999**	---	---	**-13,016**	---	---	---	**-13,016**	**3,000**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	**3,000**	---	**-10,016**	---	**296,983**

[1]The FY 2016 Enacted level reflects the transfer of $1.5 million from FDA Headquarters to the HHS Office of Inspector General to support oversight of FDA's expanded authorities.

[2]Includes restoration of $1.5 million transferred from FDA to HHS OIG in FY 2016. In the Major Activities Table: -$0.778 million of ORRR and -$3.023 million of GSA Rent are associated with Food Safety; -$0.763 million of ORRR and -$3.452 million of GSA Rent are associated with Medical Product Safety. The total FY 2016 budget authority request for Food Safety is $18.4 million; the total FY 2016 budget authority request for Medical Product Safety is -$0.3 million.

APPROPRIATION LANGUAGE

SALARIES AND EXPENSES

For necessary expenses of the Food and Drug Administration, including hire and purchase of passenger motor vehicles; for payment of space rental and related costs pursuant to Public Law 92–313 for programs and activities of the Food and Drug Administration which are included in this Act; for rental of special purpose space in the District of Columbia or elsewhere; for miscellaneous and emergency expenses of enforcement activities, authorized and approved by the Secretary and to be accounted for solely on the Secretary's certificate, not to exceed $25,000; and notwithstanding Section 521 of Public Law 107–188; **[**$4,665,400,000**]**[1] *$4,755,944,000: Provided,* That of the amount provided under this heading, [$851,481,000] $*865,653,000* shall be derived from prescription drug user fees authorized by 21 U.S.C. 379h, and shall be credited to this account and remain available until expended; [$137,677,000] *$144,859,000* shall be derived from medical device user fees authorized by 21 U.S.C. 379j, and shall be credited to this account and remain available until expended; [$318,363,000] *$324,085,000* shall be derived from human generic drug user fees authorized by 21 U.S.C. 379j–42, and shall be credited to this account and remain available until expended; [$21,540,000] *$22,079,000* shall be derived from biosimilar biological product user fees authorized by 21 U.S.C. 379j–52, and shall be credited to this account and remain available until expended; [$22,818,000] *$22,977,000* shall be derived from animal drug user fees authorized by 21 U.S.C. 379j–12, and shall be credited to this account and remain available until expended; [$9,705,000] *$10,367,000* shall be derived from animal generic drug user fees authorized by 21 U.S.C. 379j–21, and shall be credited to this account and remain available until expended; [$599,000,000] *$635,000,000* shall be derived from tobacco product user fees authorized by 21 U.S.C. 387s, and shall be credited to this account and remain available until expended: *Provided further,* That in addition and notwithstanding any other provision under this heading, amounts collected for prescription drug user fees, medical device user fees, human generic drug user fees, biosimilar biological product user fees, animal drug user fees, and animal generic drug user fees that exceed the respective fiscal year **[**2016**]** *2017* limitations are appropriated and shall be credited to this account and remain available until expended: Provided further, That fees derived from prescription drug, medical device, human generic drug, biosimilar biological product, animal drug, and animal generic drug assessments for fiscal year **[**2016**]** *2017*, including any such fees collected prior to fiscal year **[**2016**]** *2017* but credited for fiscal year **[**2016**]** *2017*, shall be subject to the fiscal year **[**2016**]** *2017* limitations: Provided further, That the Secretary may accept payment during fiscal year **[**2016**]** *2017* of user fees specified under this heading and authorized for fiscal year **[**2017**]** *2018*, prior to the due date for such fees, and that amounts of such fees assessed for fiscal year **[**2017**]** *2018* for which the Secretary accepts payment in fiscal year **[**2016**]** *2017* shall not be included in amounts under this heading: Provided further, That none of these funds shall be used to develop, establish, or operate any program of user fees authorized by 31 U.S.C. 9701: **[***Provided further*, That of the total amount appropriated: (1) $1,230,796 shall be for the Center for Food Safety and Applied Nutrition and related field activities in the Office of Regulatory Affairs; (2) $1,413,331,000 shall be for the Center for Drug Evaluation and Research and related

[1] Please note that brackets indicate deleted text and italics indicate new text.

field activities in the Office of Regulatory Affairs; (3) $361,604,000 shall be for the Center for Biologics Evaluation and Research and for related field activities in the Office of Regulatory Affairs; (4) $205,383,000 shall be for the Center for Veterinary Medicine and for related field activities in the Office of Regulatory Affairs; (5) $470,487,000 shall be for the Center for Devices and Radiological Health and for related field activities in the Office of Regulatory Affairs; (6) $63,331,000 shall be for the National Center for Toxicological Research; (7) $596,338,000 shall be for the Center for Tobacco Products and for related field activities in the Office of Regulatory Affairs; (8) not to exceed $154,697,000 shall be for Rent and Related activities, of which $64,461,000 is for White Oak Consolidation, other than the amounts paid to the General Services Administration for rent; (9) not to exceed $247,941,000 shall be for payments to the General Services Administration for rent; and (10) $311,031,000 shall be for other activities, including the Office of the Commissioner of Food and Drugs, the Office of Foods and Veterinary Medicine, the Office of Medical and Tobacco Products, the Office of Global and Regulatory Policy, the Office of Operations, the Office of the Chief Scientist, and central services for these offices:**]** *Provided further,* That not to exceed $25,000 of this amount shall be for official reception and representation expenses, not otherwise provided for, as determined by the Commissioner: **[***Provided further,* That any transfer of funds pursuant to Section 770(n) of the Federal Food, Drug, and Cosmetic Act (21 U.S.C. 379dd(n)) shall only be from amounts made available under this heading for other activities: *Provided further,* That of the amounts that are made available under this heading for ''other activities'', and that are not derived from user fees, $1,500,000 shall be transferred to and merged with the appropriation for ''Department of Health and Human Services—Office of Inspector General'' for oversight of the programs and operations of the Food and Drug Administration and shall be in addition to funds otherwise made available for oversight of the Food and Drug Administration:**]** *Provided further,* That funds may be transferred from one specified activity to another with the prior **[**approval**]** *notification* of the Committees on Appropriations of both Houses of Congress.

In addition, mammography user fees authorized by 42 U.S.C. 263b, export certification user fees authorized by 21 U.S.C. 381, priority review user fees authorized by 21 U.S.C. 360n and 360ff, food and feed recall fees, food reinspection fees, and voluntary qualified importer program fees authorized by 21 U.S.C. 379j-31, outsourcing facility fees authorized by 21 U.S.C. 379j-62, prescription drug wholesale distributor licensing and inspection fees authorized by 21 U.S.C. 353(e)(3), [and] third-party logistics provider licensing and inspection fees authorized by 21 U.S.C. 360eee-3(c)(1), and third-party auditor authorized by 21 U.S.C. 384d(c)(8), shall be credited to this account, to remain available until expended.

BUILDINGS AND FACILITIES

For plans, construction, repair, improvement, extension, alteration, *demolition,* and purchase of fixed equipment or facilities of or used by the Food and Drug Administration, where not otherwise provided, [$8,788,000] $11,788,000, to remain available until expended.

SALARIES AND EXPENSES (LEGISLATIVE PROPOSAL)

In addition, contingent upon the enactment of authorizing legislation, the Secretary shall assess user fees with respect to food facility registrations and inspections, food imports, food contact notification activities, cosmetic activities, and international express courier import activities, and such fees shall be credited to this account and remain available until expended.

FY 2017 PROPOSED GENERAL PROVISIONS

SEC. __. INCREASE IN EXPORT CERTIFICATION FEES.—

Section 801(e)(4) of the Federal Food, Drug, and Cosmetic Act (21 U.S.C. 381(e)(4)) is amended—

(1) in subparagraph (B) by striking "but shall not exceed $175 for each certification" and inserting "in an amount specified in subparagraph (E)"; and

(2) by adding at the end the following new subparagraphs:

"(E) The fee for each written export certification issued by the Secretary under this paragraph shall not exceed—

"(i) $600 for fiscal year 2017; and

"(ii) for each subsequent fiscal year, the prior fiscal year maximum amount multiplied by the inflation adjustment under section 738(c)(2)(C), applied without regard to the limitation in clause (ii)(II) of such section.

"(F) The Secretary shall, for each fiscal year, publish in the Federal Register a notice of the export certification fee under this paragraph for such year, not later than 60 days before such fee takes effect."

APPROPRIATION LANGUAGE ANALYSIS

Language Provision	Explanation
Food Inspection and Facility Registration User Fee	The Administration will propose legislation to allow FDA to collect a fee for food establishment registration and inspection. The additional resources will generate an estimated $61,252,000 to support food safety modernization activities. Revenue would target new and improved activities required by FSMA, most significantly funding to modernize FDA's inspection system, by increasing the effectiveness of inspection through adoption of preventive controls and by training of personnel to inspect against the new prevention standards as well as developing new ways of educating and informing industry.
International Courier User Fee	The Administration will propose legislation to allow FDA to collect fees for international couriers. The additional resources are estimated at $6,038,000.
Cosmetic User Fee	The Administration will propose legislation to allow FDA to collect fees for cosmetic safety. The additional resources, estimated at $20,230,000, will allow FDA to establish and maintain a Cosmetic Registration Program.
Food Contact Notification User Fee	The Administration will propose legislation to allow FDA to collect fees for food contact and notification. The additional resources, estimated at $5,193,000, will support FDA's efficient and timely review of food contact notifications.
Food Import Fee	The Administration will propose legislation to allow FDA to collect for food imports, which will generate an estimated $105,289,000 million to support FDA's food safety efforts. The fee will have exemptions for small importers and a maximum charge for large importers.
Demolition Authority	This provision provides FDA the authority demolish existing structures for owned facilities.
Export Certification Fee	This language allows FDA to increase the funding cap for the export certification fee from $175 per certification to $600 per certification for an estimated total of $4,280,000. This language, and the increased certification fee ceiling it promotes, is necessary to ensure that FDA can efficiently implement the export certification program, while ensuring that other public health programs do not suffer.

AMOUNTS AVAILABLE FOR OBLIGATION

(dollars in thousands)	FY 2015 Actual	FY 2016 Enacted	FY 2017 President's Budget
General Fund Discretionary Appropriation:			
Appropriation	2,607,697	2,728,096	2,742,712
Total Discretionary Appropriation	**2,607,697**	**2,728,096**	**2,742,712**
Mandatory Appropriation:			
CRADA	2,000	2,000	2,000
Cancer Initiative (Directed Transfer)	---	---	75,000
Total Mandatory Appropriation	**2,000**	**2,000**	**77,000**
Offsetting Collections:			
Non-Federal Sources:	1,902,868	2,017,191	2,285,908
Total Offsetting Collections	**1,902,868**	**2,017,191**	**2,285,908**
Total Obligations	**4,512,565**	**4,747,287**	**5,105,620**

* The FY 2016 Enacted revlect the transfer of $1.5 million from FDA Headquarters to the HHS Office of Inspector General to support oversight of FDA's expanded authorities.

** The FY 2015 Actuals total does not include $11.3 million for the emergency Ebola fund.

SUMMARY OF CHANGES

(dollars in thousands)	Budget Authority	User Fees	Program Level	FTE
FY 2016 Enacted	**2,728,096**	**2,017,191**	**4,745,287**	**16,205**
FY 2017 Program Changes				
Budget Authority Changes				
Reductions and Program Changes	**-19,570**	---	**-19,570**	---
Rent and Infrastructure	3,000	---	3,000	---
Food Safety	25,275	---	25,275	14
Supporting Animal Drug and Medical Device Review	2,911	---	2,911	8
Precision Medicine	2,000	---	2,000	3
Pharmacy Compounding	1,000	---	1,000	2
Combating Antibiotic Resistant Bacteria	---	---	---	1
Total Budget Authority Changes	**14,616**	---	**14,616**	**28**
User Fee Changes				
Current Law				
Prescription Drug (PDUFA)	---	14,172	14,172	3
Medical Device (MDUFA)	---	7,182	7,182	36
Generic Drug (GDUFA)	---	5,722	5,722	---
Biosimilars (BsUFA)	---	539	539	---
Animal Drug (ADUFA)	---	159	159	---
Animal Generic Drug (AGDUFA)	---	662	662	---
Family Smoking Prevention and Tobacco Control Act	---	36,000	36,000	70
Indefinite				
Mammography Quality Standards Act (MQSA)	---	413	413	---
Color Certification	---	1,544	1,544	---
Export Certification	---	---	---	---
Priority Review Vouchers (PRV) Tropical Disease	---	---	---	---
Priority Review Vouchers (PRV) Pediatric Disease	---	---	---	---
Food and Feed Recall	---	---	---	---
Food Reinspection	---	---	---	---
Voluntary Qualified Importer Program	---	---	---	---
Third Party Auditor Program	---	---	---	---
Outsourcing Facility	---	42	42	---
Subtotal, Current Law	---	**66,435**	**66,435**	**109**
Proposed				
Export Certification	---	4,280	4,280	---
Food Facility Registration and Inspection	---	61,252	61,252	69
Food Import	---	105,289	105,289	81
International Courier	---	6,038	6,038	21
Cosmetics	---	20,230	20,230	63
Food Contact Substance Notification	---	5,193	5,193	8
Subtotal, Proposed	---	**202,282**	**202,282**	**242**
Mandatory Changes				
Vice President's Cancer Moonshot (Directed Transfer)	---	---	**75,000**	**51**
Net Program Changes	**14,616**	**268,717**	**358,333**	**430**
Total FDA Request for FY 2017	**2,742,712**	**2,285,908**	**5,103,620**	**16,635**

* The FY 2016 Enacted level reflects the transfer of $1.5 million from FDA Headquarters to the HHS Office of Inspector General to support oversight of FDA's expanded authorities.

** FTE figures do not include an estimated 85 reimbursable, 1 CRADA, 2 FOIA, and 28 PEPFAR.

*** The total FY 2017 budget authority request for Food Safety is $18.4 million; the total FY 2017 budget authority request for Medical Product Safety and Availability is $3.2 million.

BUDGET AUTHORITY BY ACTIVITY

(dollars in thousands)	FY 2015 Actual	FY 2016 Enacted	FY 2017 President's Budget
Salaries and Expenses Account:			
Foods	**903,340**	**987,328**	**1,012,603**
Center	279,971	303,994	303,994
Field	623,369	683,334	708,609
Human Drugs	**482,243**	**491,503**	**491,503**
Center	346,045	355,296	354,856
Field	136,198	136,207	136,647
Biologics	**211,362**	**215,443**	**215,443**
Center	171,079	174,052	174,052
Field	40,283	41,391	41,391
Animal Drugs and Feeds	**147,564**	**158,652**	**161,852**
Center	93,496	94,005	97,205
Field	54,068	64,647	64,647
Devices and Radiological Health	**320,793**	**323,253**	**325,764**
Center	240,318	240,808	243,319
Field	80,475	82,445	82,445
National Center for Toxicological Research	**63,312**	**63,331**	**60,277**
FDA Headquarters	**173,292**	**181,587**	**178,287**
FDA White Oak Consolidation	**43,044**	**48,044**	**43,044**
Other Rent and Rent Related	**72,943**	**73,484**	**71,943**
GSA Rental Payments	**168,882**	**176,683**	**170,208**
Subtotal, Salaries and Expenses Account	**2,586,775**	**2,719,308**	**2,730,924**
Food and Drug Safety -- No Year (P.L. 113-6)	**11,925**	**---**	**---**
Food Safety	9,506	---	---
Drug Safety	2,419	---	---
Buildings and Facilities Account	**8,997**	**8,788**	**11,788**
Total Budget Authority	**2,607,697**	**2,728,096**	**2,742,712**
FTE	**10,111**	**10,363**	**10,391**

* The FY 2016 Enacted level reflects the transfer of $1.5 million from FDA Headquarters to the HHS Office of Inspector General to support oversight of FDA's expanded authorities.

** FTE figures do not include an estimated 85 reimbursable, 1 CRADA, 2 FOIA, and 28 PEPFAR.

APPROPRIATIONS HISTORY

Salaries and Expenses

(dollars)	Budget Estimate to Congress	House Allowance	Senate Allowance	Appropriation
General Fund Appropration*:				
FY 2008	2,051,801,000	1,683,405,000	2,276,262,000	2,235,876,000
FY 2009 1/	2,638,197,000		3,168,794,000	2,622,267,000
FY 2010	3,371,218,000	3,230,218,000	3,230,218,000	3,237,218,000
FY 2011	3,989,507,000		3,720,044,000	3,650,783,000
FY 2012	4,256,673,000	3,599,871,000	3,599,871,000	3,788,336,000
FY 2013				
Base	4,449,283,000	4,153,933,000	4,197,658,000	4,203,577,000
Sequestration	---	---	---	-207,550,000
Subtotal	4,449,283,000	4,153,933,000	4,197,658,000	3,996,027,000
FY 2014	4,613,104,000	4,280,164,000	4,346,670,000	4,346,670,000
FY 2015 2/	4,689,706,000	4,428,900,000	4,443,356,000	4,443,356,000
FY 2016	4,889,642,000	4,579,118,000	4,589,562,000	4,681,392,000
FY 2017	4,953,946,000			

* Excludes Indefinite user fees.

1/ FY 2009 Appropriation does not include Supplemental Appropriation

2/ The FY 2015 Enacted level requires the transfer of $1.5 million from FDA Headquarters to the HHS Office of Inspector General to support oversight of FDA's expanded authorities. In addition to the funding displayed in the table above, the FY 2015 Enacted level includes $25 million in emergency funding for FDA's role in the U.S. Government response to contain, treat, and prevent the spread of Ebola.

Buildings and Facilities

(dollars)	Budget Estimate to Congress	House Allowance	Senate Allowance	Appropriation
General Fund Appropration:				
FY 2008	4,950,000	4,950,000	4,950,000	2,433,000
FY 2009	2,433,000		12,433,000	12,433,000
FY 2010	12,433,000	12,433,000	12,433,000	12,433,000
FY 2011	12,433,000		9,980,000	9,980,000
FY 2012	13,055,000	8,788,000	8,788,000	8,788,000
FY 2013				
Base	5,320,000	---	5,320,000	5,176,000
Sequestration	---	---	---	-256,000
Subtotal	5,320,000	---	5,320,000	4,920,000
FY 2014	8,788,000	---	11,000,000	8,788,000
FY 2015	8,788,000	8,788,000	8,788,000	8,788,000
FY 2016	8,788,000	8,788,000	8,788,000	8,788,000
FY 2017	11,788,000			

FOODS

(Dollars in Thousands)	FY 2015 Final	FY 2015 Actuals	FY 2016 Enacted	FY 2017 President's Budget	FY 2017 +/- FY 2016
Foods	**913,784**	**903,340**	**998,914**	**1,195,067**	**196,153**
Budget Authority	***903,403***	***903,340***	***987,328***	***1,012,603***	***25,275***
User Fees	***10,381***	---	***11,586***	***182,464***	***170,878***
Center	280,480	279,971	304,544	355,956	51,412
Budget Authority	279,994	279,971	303,994	303,994	---
User Fees	486	---	550	51,962	51,412
Food and Feed Recall	*243*	---	*243*	*243*	---
Voluntary Qualified Importer Program	*243*	---	*243*	*243*	---
Third Party Auditor Program	---	---	*64*	*64*	---
Food Facility Registration and Inspection	---	---	---	*23,717*	23,717
Food Import	---	---	---	*9,974*	9,974
Cosmetics	---	---	---	*12,995*	12,995
Food Contact Substance Notification	---	---	---	*4,726*	4,726
Field	633,304	623,369	694,370	839,111	144,741
Budget Authority	623,409	623,369	683,334	708,609	25,275
User Fees	9,895	---	11,036	130,502	119,466
Food and Feed Recall	*1,000*	---	*1,000*	*1,000*	---
Food Reinspection	*4,575*	---	*4,575*	*4,575*	---
Voluntary Qualified Importer Program	*4,320*	---	*4,320*	*4,320*	---
Third Party Auditor Program	---	---	*1,141*	*1,141*	---
Food Facility Registration and Inspection	---	---	---	*27,891*	27,891
Food Import	---	---	---	*86,122*	86,122
International Courier	---	---	---	*779*	779
Cosmetics	---	---	---	*4,674*	4,674
FTE	**3,720**	**3,667**	**3,925**	**4,109**	**184**

Authorizing Legislation: Federal Food, Drug, and Cosmetic Act (21 U.S.C. 321-399); Federal Import Milk Act (21 U.S.C. 142-149); Public Health Service Act (42 U.S.C. 201, et seq.); Food Additives Amendment of 1958; Color Additives Amendments of 1960; The Fair Packaging and Labeling Act (15 U.S.C. 1451-1461); Safe Drinking Water Act (21 U.S.C. 349); Saccharin Study and Labeling Act; Infant Formula Act of 1980; Drug Enforcement, Education, and Control Act of 1986; Nutrition Labeling and Education Act of 1990; Dietary Supplement Health and Education Act of 1994; Food Quality Protection Act of 1996; Federal Tea Tasters Repeal Act (42 U.S.C. 41); Safe Drinking Water Act Amendments of 1996 (21 U.S.C. 349); Food and Drug Administration Modernization Act of 1997; Antimicrobial Regulation Technical Corrections Act of 1998; Public Health Security and Bioterrorism Preparedness and Response Act of 2002; Food Allergen Labeling and Consumer Protection Act of 2004; Sanitary Food Transportation Act of 2005; Food and Drug Administration Amendments Act of 2007; Food and Drug Administration Food Safety Modernization Act of 2011 (Public Law 111-353); Dietary Supplement and Nonprescription Drug Consumer Protection Act (21 U.S.C. 379aa-1)

Allocation Methods: Direct Federal/intramural; Contract; Competitive grant

PROGRAM DESCRIPTION AND ACCOMPLISHMENTS

The purpose of the Foods Program is to protect and promote the health of humans and animals by ensuring the safety and proper labeling of the American food supply, animal feed, and cosmetics, as well as the safety and effectiveness of animal drugs and devices. The Foods Program began with the passage of the 1906 Pure Food and Drugs Act.

FDA's Foods Program is a component of the FDA Foods and Veterinary Medicine (FVM) Program. The FVM Program is comprised of the Foods and the Animal Drugs and Feeds Programs, including field activities in the Office of Regulatory Affairs (ORA). The operations of the Foods and Animal Drugs and Feeds Programs are administered by the Center for Food Safety and Applied Nutrition (CFSAN) and the Center for Veterinary Medicine (CVM) respectively,[4] both in collaboration with ORA. CFSAN ensures the safety of the human food supply, dietary supplements, and cosmetics as well as the proper labeling of foods and cosmetics. The Foods Program also ensures that the nation's food supply is wholesome and honestly labeled, and that nutrition labeling is informative and accurate, and promotes a nutritionally healthy food supply. The Center for Veterinary Medicine protects human and animal health by approving safe and effective drugs, feed, and devices for animals. The Office of Foods and Veterinary Medicine (OFVM) provides leadership and strategic direction to Foods and Veterinary Medicine programs, including direct oversight of all activities of CFSAN and CVM. Additionally, OFVM manages the crosscutting outbreak response and evaluation team, leads all external communications and stakeholder engagements, and coordinates FVM wide resource planning.

The FVM Strategic Plan[5] provides a guiding strategic vision for FDA's food, feed, and veterinary medicine activities, including the implementation of the Food Safety Modernization Act (FSMA). The Plan contains one cross-cutting goal: protecting consumers and promoting public health, starting with four programmatic goals:

- Goal One: Food Safety- Protect America's Consumers and Animals from Foreseeable Hazards
- Goal Two: Nutrition- Foster an Environment to Promote Healthy and Safe Food Choices
- Goal Three: Animal Health- Protect Human and Animal Health by Enhancing the Safety and Effectiveness of Animal Health Products
- Goal Four: Organizational Excellence- Continuously Improve the Leadership, Management, Staffing, and Organizational Capacity of the FVM Program to Protect Public Health

Outbreaks of foodborne illness and contamination events have a substantial impact on public health:

- an estimated 48 million foodborne illnesses occur every year
- an estimated 128,000 hospitalizations and 3,000 deaths result[6]

[4] The Center for Veterinary Medicine does not implement the Foods Program, and the Center for Food Safety and Applied Nutrition does not implement the Animal Drugs and Feeds Program.
[5] *FDA Foods and Veterinary Medicine Program Strategic Plan, 2012 – 2016*. http://www.fda.gov/downloads/AboutFDA/CentersOffices/OfficeofFoods/UCM273732.pdf.
[6] CDC. 2011.Estimates of Foodborne Illness in the United States. A comparable analysis cannot be made between CDC's 2011 estimates of foodborne illnesses and findings from earlier years due to a new methodology being used in 2011.

- foodborne illnesses cost an average $1,626 per case.
- More than $75 billion per year in total medical costs, lost productivity, and illness-related mortality result.[7]

Additionally, poor nutrition contributes to chronic diseases, which are the leading cause of death and disability in the United States. Chronic diseases and conditions—such as heart disease, stroke, cancer, diabetes, obesity, and arthritis—are among the most common, costly, and preventable of all health problems, and 86 percent of all health care spending in 2010 was for people with one or more chronic medical conditions.[8]

FDA faces unique food safety challenges in the twenty first century. The Food Safety Modernization Act (FSMA) enables FDA to better protect the public health by strengthening the food and feed safety system and empowering FDA to modernize its food safety work by:

- shifting the food safety paradigm from the previous system of addressing issues after they occur to a new one focused on prevention
- strengthening FDA's technical expertise and capacity to support the industry in implementing the new prevention standards
- furthering federal, state, local and territorial partnerships and investing in training and capacity to ensure efficient, high quality, and consistent oversight nationwide
- broadening interaction with foreign partners and increasing oversight of importers by placing more responsibility for the safety of imported foods on them

FSMA also provides FDA with new enforcement authorities designed to achieve high rates of compliance with prevention- and risk-based food and feed safety standards and to better respond to and contain problems when they occur.

The FVM Strategic Plan provides a framework for the implementation of FSMA and other legislative authorities and places high priority on the prevention of foodborne and feed-borne illness of unknown origins, as well as illness that can be specifically attributed to known sources. The Foods Program addresses food safety risks at multiple points of the food supply chain through a combination of regulations, guidance, technical assistance, training, outreach, consumer information, and model codes for food service establishments such as restaurants.

The FVM Strategic Plan also emphasizes the nutrition-related priorities of the Foods Program. Poor diet is a key risk factor which contributes to the high rates of chronic disease, including obesity, in the United States. The Foods Program ensures that nutrition labeling is informative and accurate, and promotes a nutritionally healthy food supply to reduce the hundreds of thousands of deaths each year attributable to poor diet.

In addition to the high-priority initiatives identified in the FVM Strategic Plan, the Foods Program conducts many other important activities related to food safety, nutrition, and cosmetics. These include:

- review of infant formula notifications received from manufacturers prior to marketing of a new formula

[7] Scharff, Robert L., "Economic Burden from Health Losses Due to Foodborne Illness in the United States," Journal of Food Protection, Volume 75, Number 1, January 2012, pp. 123-131(9).
[8] Centers for Disease Control and Prevention. "Chronic Disease Prevention and Health Promotion: Chronic Disease Overview." http://www.cdc.gov/chronicdisease/overview/, Accessed October 23, 2015.

- premarket regulation of ingredients and packaging, such as the review of food additive and color additive petitions
- postmarket monitoring for chemical contaminants
- authorization of nutrient content and health claims
- regulation of dietary supplements
- cosmetics safety and labeling
- other ongoing regulatory, enforcement, research, communications, education, and outreach activities.

The following selected accomplishments demonstrate the Foods Program's delivery of its regulatory and public health responsibilities within the context of current priorities and demonstrate progress towards the goals identified in the FDA and FVM Strategic Plans.

Enhance Oversight

The FDA Strategic Plan goal of Enhanced Oversight is the primary goal in which most Foods Program activities are best categorized. As a regulatory and scientific organization responsible for the safety of the nation's foods and cosmetics, much of the Foods Program's mission involves oversight work relating to scientific analysis and support, policy, guidance development, and regulatory research.

Selected Rules Published in 2015

Below are proposed and final rules published by the Foods Program/CFSAN during calendar year 2015. These rules help address various issues.[9]

Date	#	Purpose
Nov 2015	FDA-2011-N-0146	Final Rule – FSMA Final Rule on Accredited Third-Party Certification Establishes user fees to support FDA's Accreditation of Third-Party Auditors Program.
Sep 2015	FDA-2011-N-0920	Final Rule – Current Good Manufacturing Practice and Hazard Analysis and Risk-Based Preventive Controls for Human Food (Preventive Controls for Human Food) Modernizes human food CGMPs and requires certain facilities to establish and implement hazard analysis and risk-based preventive controls.
Jul 2015	FDA-2012-N-1210	Supplemental Proposed Rule - Food Labeling: Revision of the Nutrition and Supplement Facts Labels; Supplemental Proposed Rule To Solicit Comment on Limited Additional Provisions Revises proposed nutrition facts label rule to include a daily value for added sugars.
Apr 2015	FDA-2002-N-0323	Proposed Rule – Amendments to Registration of Food Facilities Improves the food facility registration system and implements FSMA registration provisions.

[9] For more information on FDA rules please visit http://www.fda.gov/RegulatoryInformation/RulesRegulations/default.htm.

Selected Guidances Issued in 2015

Below are draft and final guidances issued by CFSAN during calendar year 2015. These guidances help address various issues.[10]

Date	#	Title	Description
Sep 2015	FDA-2011-F-0172	Labeling & Nutrition (Menu)	Labeling Guide for Restaurants and Retail Establishments Selling Away-From-Home Foods - Part II
Jun 2015	FDA-2014-D-0052	Allergens	Guidance for Industry: Food Allergen Labeling Exemption Petitions and Notifications
Jun 2015	FDA-2011-N-0144	Food Defense (Importers)	Draft Guidance for Industry: FDA's Voluntary Qualified Importer Program
May 2015	FDA-2015-D-0138	Food Defense (Recalls)	Draft Guidance for Industry: Questions and Answers Regarding Mandatory Food Recalls
Mar 2015	FDA-2011-F-0172	Labeling & Nutrition (Menu)	Guidance for Industry: Nutrition Labeling of Standard Menu Items in Restaurants and Similar Retail Food Establishments; Small Entity Compliance Guide

FSMA Rules

In January 2011, the President signed into law the FDA Food Safety Modernization Act (FSMA). FSMA enables FDA to better protect public health by helping to ensure the safety and security of the food supply. FDA is able to focus more on preventing food safety problems rather than relying primarily on reacting to problems after they occur. This law is the most significant modernization of the U.S. food safety system in 70 years and mandates the development and implementation of seven foundational rules, to establish a new preventive controls framework for domestically produced and imported food, among other things.

Under FSMA, those that import food have a responsibility to ensure that their suppliers produce food that meets U.S. safety standards. Following the issuance of four of the rules proposed in 2013 – Preventive Controls for Human Food, Preventive Controls for Animal Food, Produce Safety, and Foreign Supplier Verification Programs – FDA received extensive input from industry, consumers, and Members of Congress that prompted FDA to revise these rules. In December 2013 and early 2014, FDA announced that it would issue revised rule provisions for public comment, which resulted in the publication of revised rules in 2015.

Described below are the foundational final FSMA rules published by the Foods Program. The table shows the final rules ordered by their respective publication dates.[11]

Date	#	Purpose
Sep 2015	FDA-2011-N-0920	Final Rule #1 – Current Good Manufacturing Practice and Hazard Analysis and Risk-Based Preventive Controls for Human Food (Preventive Controls for Human Food)

[10] For more information on guidance please visit http://www.fda.gov/RegulatoryInformation/Guidances/.
[11] For more information on the FSMA rules please visit http://www.fda.gov/Food/GuidanceRegulation/FSMA/default.htm.

Date	#	Purpose
Sep 2015	FDA-2011-N-0922	Final Rule #2 - Establish Current Good Manufacturing Practice and Hazard Analysis and Risk-Based Preventive Controls for Food for Animals (Preventive Controls for Animal Food)
Nov 2015	FDA-2011-N-0921	Final Rule #3 - Standards for Growing, Harvesting, Packing and Holding of Produce for Human Consumption(Produce Safety rule)
Nov 2015	FDA-2011-N-0143	Final Rule #4 - Foreign Supplier Verification Programs for Importers of Food for Human and Animals (FSVP rule)
Nov2015	FDA-2011-N-0146	Final Rule #5 - Accreditation of Third-Party Certification Bodies to Conduct Food Safety Audits and to Issue Certifications (Accredited Third-Party Certification rule)

The first final FSMA rule Preventive Controls for Human Food, requires manufacturers, processors, and packers of food for consumption in the United States to take steps such as creating written plans that identify likely hazards, identifying monitoring procedures, recording monitoring results, and implementing corrective actions if problems occur.

The second final rule on preventive controls focuses on animal food safety and sets Current Good Manufacturing Practice standards that take into consideration the unique aspects of the animal food industry. This rule is discussed further in the Animal Drugs and Feeds Program narrative.

The third final rule addresses standards for produce safety by establishing enforceable science- and risk-based processes for the growing, harvesting, packing, and holding of fruits and vegetables on farms. The 2014 supplemental proposal for this rule revised the criteria for determining the safety of agricultural water for certain uses to add flexibility and introduce a tiered approach to water testing. FDA deferred its decision on an appropriate time interval between the application of raw manure and the harvesting of a crop until additional research is conducted, and FDA removed the nine-month interval originally proposed. Also, FDA proposed eliminating the 45-day minimum application interval for composted manure that meets proposed microbial standards and application requirements.

The fourth final rule sets the foundation for a new approach to the oversight of the safety of imported food. Imported food comes to the United States from about 150 different countries. Under the rule for Foreign Supplier Verification Programs (FSVP), importers need to verify that their suppliers meet the same level of public health protection as required of domestic producers. Requirements for verification activities are based primarily on the type of food, nature of the hazard identified, and the foreign supplier.

The fifth final rule establishes the program for the accreditation of third-party certification bodies to conduct food safety audits and to certify that foreign food facilities and food produced by such facilities meet applicable FDA food safety requirements. FDA recognizes accreditation bodies based on certain criteria such as competency and impartiality. The accreditation bodies, which may be foreign government agencies or private companies, would in turn accredit third-party auditors to audit and issue certifications for foreign food facilities. This program will begin collecting user fees in 2016.

The remaining two FSMA rules are scheduled to be issued in spring 2016. They will address sanitary transportation and intentional adulteration of the food supply.

Released FSMA Operational Strategy
FDA released a FSMA Operational Strategy Document on May 2, 2014.[12] The document highlights how FSMA changes the way FDA approaches food safety and also sets forth the operational strategy for implementing those changes. The operational strategy focuses on how FDA can implement FSMA by prioritizing prevention, voluntary compliance, risk-based oversight, and expanded collaboration across the food safety community.

Next, FDA will design methods to promote voluntary industry compliance with the new rules and also establish preventive and public-health-focused inspection and sampling programs to oversee compliance. FDA is also developing enforcement strategies to address situations when producers, processors, distributors, and importers fail to comply voluntarily.

Published Draft Voluntary Qualified Importer Program (VQIP) Guidance
As part of FSMA implementation, FDA published draft guidance in June 2015 regarding the establishment of a voluntary, fee-based program for the expedited review and importation of foods into the United States from importers with a proven food safety track record. This program is referred to as the Voluntary Qualified Importer Program (VQIP). VQIP will benefit both importers and consumers by enabling FDA to focus its resources on food imports that are more likely to present a risk to public health.

FSMA provides FDA with new authorities to ensure that foods imported into the United States meet the same safety standards as those set for domestically produced foods. In addition to establishing mandatory standards for importers of food, FDA is establishing the VQIP for importers who achieve and maintain a high level of control over the safety and security of their supply chains.

The draft guidance on the eligibility, benefits, and criteria of the VQIP will be available for public comments for a 75-day period. After comments are considered and the guidance is finalized, the program is expected to be open for applications in January 2018 to allow enough time for a facility to be certified under FDA's Accredited Third Party Certification program.

Improved Outbreak Response
The Foods Program and the Coordinated Outbreak Response and Evaluation (CORE) team rapidly detects and responds to major foodborne illness outbreaks. This team coordinates activities across FDA field offices and compliance offices, state investigative and laboratory resources, and local city and county resources. The CORE team also works in cooperation with other federal agencies such as CDC to ensure timely and effective resolution of foodborne illness outbreaks. Examples of these activities include the Cyclospora outbreaks over the years 2012 – 2015 from salads and cilantro; the Hepatitis A outbreak from frozen berries imported from Turkey; and the ice cream Listeria monocytogenes outbreak that involved four states and caused ten illnesses and three deaths.

In preparation for outbreak response, FDA field offices support and provide technical assistance to laboratories awarded International Organization for Standardization (ISO) Cooperative Agreement Program (CAP) grants and laboratories seeking or maintaining their accreditation. This program continues to include additional national food/feed testing laboratories, with 23 laboratories joining the program, of which several are making significant progress towards ISO

[12] FSMA Operational Strategy: http://www.fda.gov/Food/GuidanceRegulation/FSMA/ucm395105.htm

accreditation in a short timeframe. Data generated by the awarded laboratories will be available to inform FDA in its enforcement actions, surveillance, and response to foodborne outbreaks. These ISO accredited laboratories will aid FDA with additional resources and exceptional data to maintain the safety of the food chain.

Improved Pathogen Detection and Traceability

FDA established the first national pilot network of whole genome sequencers (WGS), coined the GenomeTrakr. The Network is now in its fourth year and has accumulated more than 35,000 whole bacterial genome sequences from the FDA Network and collaborating sites in a publicly accessible database at The National Institutes of Health. FDA also developed outbreak traceback methodology based on whole bacterial genomes that can distinguish the source of certain outbreaks down to the farm level.

The implementation of WGS has significantly reduced the time necessary to conduct outbreak investigations while greatly enhancing FDA's ability to pinpoint the source of contamination events. Sample collection and sequence cataloging from food production sites can help monitor compliance with FDA's rules on safe food-handling practices, enhancing preventive controls for food safety.

WGS was used extensively in 2015 for foodborne outbreak investigations and compliance actions. For example, a *Salmonella poona* outbreak in summer 2015 sickened more than 600 people. WGS unambiguously linked human illness cases to *Salmonella poona* found on imported cucumbers, identifying the source of the contamination and subsequently limiting the scope of the recall to products from a few specific firms. Additionally, WGS also played a significant role in the investigation of outbreaks related to *Listeria monocytogenes* in ice cream. The use of WGS allowed FDA and its partners to tie clinical isolates collected over the course of the past several years to specific ice cream production facilities, linking previously unassociated cases and pinpointing the source of the outbreak. The combination of real-time clinical and food/environmental surveillance using WGS has dramatically reduced the average cluster size for *Listeria* outbreaks from 9 to 3 over the past two years and has increased the number of illnesses that could be linked to specific food sources. WGS is now applied regularly and as part of standard operations in foodborne outbreak traceability for Salmonella and Listeria monocytogenes in the FDA Foods Program.[13] Moreover, the GenomeTrakr database is now generating, on average, about one whole genome per hour, to increase the numbers of Salmonella and Listeria monocytogenes in the database. The network currently consists of 18 state laboratories, 12 FDA laboratories, and other federal partners from CDC and USDA-FSIS.

FDA's enhanced ability to pinpoint outbreaks is particularly important considering the global nature of the food supply. In the past year, in collaboration with the World Health Organization, an international GenomeTrakr laboratory was established and made operational in Buenos Aires, Argentina. Food and environmental isolates from South America are now being sequenced and

[13] *Listeria monocytogenes* are a bacterium that can cause Listeriosis, a serious infection usually caused by eating contaminated food. The disease primarily affects older adults, pregnant women, newborns, and adults with weakened immune systems. However, rarely, persons without these risk factors can also be affected. The risk may be reduced by recommendations for safe food preparation, consumption, and storage.

submitted to the open-source database. WGS has additional groundbreaking applications for the Foods Program including:

- being utilized to make outbreak investigations faster and more efficient
- being incorporated into quality control protocols for FDA testing and surveillance, leading to enhanced confidence in regulatory actions
- monitoring compliance standards for preventive controls to identify emerging antimicrobial resistance threats in the food supply

Launched 2014 FDA Food Safety Challenge

FDA announced the 2014 Food Safety Challenge in September 2014 to target solutions for foodborne illness with particular focus on Salmonella bacteria. Salmonella represents the leading cause of deaths and of hospitalizations related to foodborne illness while contaminated produce is responsible for nearly half of foodborne illnesses and almost a quarter of foodborne-related deaths.

The Challenge utilizes authority granted under The America COMPETES Reauthorization Act of 2010 to offer a $500,000 prize in FDA's first open innovation competition. The challenge was a call to scientists, academics, entrepreneurs, and innovators from all disciplines to submit concepts applying novel or advanced methodologies to foster revolutionary improvements in foodborne pathogen detection and specifically, to accelerate detection of Salmonella in produce.

In July 2015, five finalists, who were each awarded $20,000, were invited to present their concepts in person to a panel of judges that included food safety experts from FDA, USDA, and CDC. Two finalists were later announced:

- Purdue University received the grand prize of $300,000 for "physical method for concentrating salmonella to detectable levels using automated microfiltration."
- Pronucleotein Inc. received the runner-up prize of $100,000.

As FDA's foods program implements FSMA and incorporates preventive control measures, identifying quicker detection of harmful bacteria, through methods such as those presented in FDA's Food Safety Challenge, can help to prevent foodborne illnesses from occurring.

Developed Seafood Product Labeling Online Learning Module

In order to ensure the proper labeling of seafood products offered for sale in the U.S., FDA developed an online learning module for seafood producers, retailers, state regulators, and others involved in the processing, distribution, sale, or regulation of seafood.

The module provides an overview of federal identity labeling requirements for seafood and also lists the specific laws, regulations, guidance documents, and other materials that are pertinent to the proper labeling of seafood. Stakeholders will be able to better understand FDA's role in ensuring the proper labeling of seafood and get tips for identifying mislabeled seafood, whether it is in the wholesale distribution chain or at the point of retail. The module helps stakeholders properly identify seafood throughout the supply chain while also ensuring that appropriate food

safety controls are implemented and consumers are getting the type of seafood they expect for what they are paying.

This effort included FDA's Fish Seafood Compliance and Labeling Enforcement (SCALE) project, which was recognized by HHS as one of seven Department-wide recipients of the 2015 innovation awards. The project included modernizing FDA's previous method of identifying seafood by proteins, which are unstable under most forms of processing or cooking, and break down over time in previously-required standards.

Instead of protein profiles, FDA now utilizes DNA barcoding which provides a DNA sequence that analysts can compare to standard reference sequences accessible online in a curated FDA library to properly identify different seafood products. These efforts also impact food safety, as FDA field staff are able to more properly identify species of imported puffer fish that can potentially be toxic and is currently restricted to a single species from Japan.

Encouraged the Safe Production of Dietary Supplements

In FY 2015, FDA initiated several focused regulatory actions aimed at addressing ingredient safety for marketed dietary supplements. Additionally, FDA field investigators completed 517 domestic and 52 foreign inspections of firms to enforce dietary supplement regulations, including current Good Manufacturing Practices (cGMPs) and labeling requirements. These inspections and initiatives have resulted in:

- 78 warning letters
- 7 untitled letters
- 5 regulatory meetings
- 5 injunctions.

FDA field investigators continue to enhance their knowledge through regular training sessions on the cGMP requirements, with 118 FDA personnel (and 6 state officials) completing the training at four sessions in FY 2015. Furthermore, cGMP staff members are working with FDA's Center of Excellence at the University of Mississippi's National Center for Natural Products Research (NCNPR) to develop an advanced session focusing on analytical methodology.

Mandatory premarket safety notifications describing new dietary ingredients (NDIs) in dietary supplements are vital to FDA's knowledge of marketed dietary ingredients. FY 2015 saw 35 NDI notifications and most of these (65 percent) resulted in an objection response from FDA due to inadequate safety, incomplete information, or other issues.

To address this high objection rate, FDA intends to issue a revised draft guidance to industry, describing expectations for when an NDI notification is necessary and what it should include. FDA has also initiated regulatory actions aimed at ingredients that did not go through proper FDA review prior to being marketed to ensure the importance of the NDI notification requirement is clear to stakeholders.

In FY 2015, FDA received more than 3,000 voluntary and mandatory adverse event reports associated with dietary supplements. These reports are reviewed to identify any products or ingredients that may have safety implications for the consumer. This information was used for targeted inspections and regulatory actions against unsafe products, e.g., pure powdered caffeine products.

In early FY 2016, FDA announced the creation of the Office of Dietary Supplements[14] (ODSP) within CFSAN. Elevating the program's position from its previous designation as a division to a new, independent office will raise the profile of the dietary supplements program within the agency. The creation of this office will further enhance the effectiveness of dietary supplement regulation by allowing ODSP to better compete for government resources and capabilities to regulate this rapidly expanding industry.

Enhanced Food Emergency Response Network Capacity

In preparation for food-related emergencies and high-profile events, FDA provides direct oversight to the Food Emergency Response Network (FERN) and utilizes FDA's field laboratories as well as Center and FERN laboratories. FERN grants provide state-of-the-art equipment, analytical platforms, methodology, training, and proficiency testing that can be used for surge capacity, outbreak sampling, and large surveillance assignments. FERN support also includes the FERN training program that provides courses for both federal and state laboratory analysts. FDA also maintains the FERN Storeroom that provides reagents and supplies to federal and state laboratories to support analytical activities.

This program increases the FERN capacity and analytical capability for chemical, microbiological, and radiological testing that enhances the response to food emergency events– including food safety and food defense. In FY 2015, FDA awarded 15 microbiological, 14 chemistry, and 5 radiochemistry cooperative agreement grants.

Exercised Science-Based Compliance Actions

When firms violate FDA requirements, FDA monitors firms and encourages prompt voluntary corrective action to obtain full compliance. When firms refuse or are unable to comply with FDA regulations, or FDA identifies a safety risk, FDA pursues regulatory action to prevent unsafe or improperly labeled products from reaching U.S. consumers.

FDA monitors the recalls of food, cosmetic, and dietary supplement products and ensures that violative products are effectively removed from commerce.

In FY 2015, FDA classified 304 Class I (most serious), 254 Class II, and 42 Class III human food recall events. FDA also puts import controls into place when non-compliant food products are discovered or food manufacturers are determined to be manufacturing or shipping non-compliant products. In FY 2015, FDA issued 899 of these import alert notices.

FDA created a new Import Alert # 24-23 in response to the recurring outbreaks of Cyclosporiasis associated with multiple illnesses in the United States due to cilantro contaminated with *Cyclospora cayetanensis*. This new Import Alert imposed import controls for cilantro from the state of Puebla, Mexico from April 1 – August 30, which are the months in which the *Cyclospor*a would be expected to be prevalent. Additionally, CFSAN worked in conjunction with the FDA field to assist in 644 cases where the district needed CFSAN's technical expertise to come to the right decision regarding import admissibility.

In addition, FDA protects the public from impure, adulterated, and misbranded food and acts as an industry-wide deterrent for regulated entities as well as criminal enterprises through its

[14] For more information on the creation of the Office of Dietary Supplements, please visit: http://www.fda.gov/Food/NewsEvents/ConstituentUpdates/ucm478303.htm

authority to initiate criminal cases. For example, in FY 2015, FDA issued three injunctions and one seizure related to adulterated or misbranded food.

Issued Draft Guidance on Mandatory Food Recalls

FSMA provided FDA with the authority to order a responsible party to recall a food if there is a reasonable probability that the food is adulterated or misbranded under certain provisions of the Federal Food, Drug, and Cosmetic Act, and that the use of or exposure to that food will cause serious adverse health consequences or death. Prior to the enactment of FSMA in January 2011, FDA had to rely on manufacturers to voluntarily recall food products. FDA has used this authority twice. In both cases, FDA issued letters to the responsible party warning that if the firm did not voluntarily cease distribution and conduct a recall, FDA may require the firm to cease distribution and give notice to other parties. These letters were effective in compelling industry to recall contaminated products and helped prevent more widespread illness outbreaks.

Regarding this authority on mandatory food recalls, FDA published a draft guidance for industry in May 2015. The draft guidance, which is available for public comment, is in the form of questions and answers that focus on common questions that might arise about how FDA will use this mandatory recall authority. FDA will consider all comments before publishing final guidance.

Removal of Most Artificial Trans Fats from Processed Foods

Based on a thorough review of scientific evidence, in June 2015, FDA finalized its determination that partially hydrogenated oils (PHOs), the primary dietary source of artificial *trans* fat in processed foods, are not "generally recognized as safe" (GRAS) for use in food. PHOs are the primary source of industrially produced *trans* fat and are found in many popular processed foods such as baked goods and frozen foods.

A 2002 study by the National Academy of Science's Institute of Medicine found a direct correlation between intake of trans fat and increased levels of low density lipoprotein (LDL) cholesterol, commonly referred to as "bad" cholesterol, and therefore, increased risk of heart disease. Eliminating *trans* fat from food is expected to reduce coronary heart disease and to prevent thousands of fatal heart attacks each year.

FDA has set a compliance period of three years to allow food manufacturers to either reformulate products without PHOs or petition FDA to permit specific uses of PHOs. FDA has also encouraged consumers seeking to reduce *trans* fat intake to check a food's ingredient list to determine whether or not it contains PHOs.

Published Infant Formula Rule

In June 2014, the Foods Program published a final rule that sets standards for infant formula manufacturers to help ensure that the formulas produced continue to be safe and support healthy growth. Issuance of the final rule provides for greater protection of infants and amends FDA's quality control procedures, requirements about how and when manufacturers must notify FDA about new formulas and changes to formulas, and requirements concerning what records and reports must be established and maintained.

The rule establishes current Good Manufacturing Practices specifically designed for infant formula, including required testing for contamination from harmful bacteria such as *Cronobacter* and *Salmonella*, in addition to the quality factors of normal physical growth and biological quality of the protein. The final rule also helps ensure that infant formula contains all federally

required nutrients to support healthy growth, including protein, fat, and certain vitamins and minerals.

In June of 2015, FDA issued an additional final rule to add selenium to the list of required nutrients for infant formula and to establish both minimum and maximum levels of selenium required in infant formula. Selenium is the 30th nutrient now required by law to be in infant formula. Among its benefits, selenium helps the body defend against oxidative stress and aids in the regulation of thyroid hormones.

In May 2014, the People's Republic of China implemented a decree requiring registration of any formula powders for infants and young children originating from sources outside of China and intended to be exported into China. The same decree also banned the import of the same products by any unregistered enterprise.

FDA worked with other multiple governmental entities to ensure that Chinese concerns were addressed and that U.S. manufacturers could continue to export products to China. The U.S. delegation worked with Chinese representatives to conduct on-site audits of U.S. manufacturing facilities of the subject commodities. At the conclusion of the audits, the Chinese granted approval to certain U.S. infant formula manufacturers resulting in a one billion dollar trade agreement with the United States. FDA efforts will continue under this initiative to ensure U.S. trade capabilities are minimally impacted.

Launched Food Defense Plan Builder

In FY 2015, FDA evaluated comments in response to the proposed rule on "Focused Mitigation Strategies to Protect Food Against Intentional Adulteration" as part of its implementation of FSMA. The requirements within the rule, once finalized in May 2016, will require that food facilities develop and implement a food defense plan. In anticipation of the final rule, FDA will be updating the Food Defense Plan Builder, a user-friendly software program designed to assist owners and operators of food facilities with developing personalized food defense plans for their facilities.

This user-friendly tool harnesses existing FDA tools, guidance, and resources for food defense into one single application. The tool guides users through a series of sections:

- Company Information
- Broad Mitigation Strategies
- Vulnerability Assessments
- Focused Mitigation Strategies
- Emergency Contacts
- Action Plan
- Supporting Documents.

The information collected from each of these sections, automatically compiles a food defense plan for their facility. Since its launch in May 2013, the Food Defense Plan Builder received excellent reviews from industry and has been downloaded more than 18,000 times by users from all over the world.

Improve and Safeguard Access

The Foods Program has several programmatic aspects that fall within the FDA goal of improving and safeguarding access that largely consist of premarket review activities. The Foods Program has statutory responsibility for review and approval of all petitions for direct food additives in addition to review and approval of all new food contact substances, food contact materials, packaging, antimicrobials, and other indirect food additives. Also included in this category is review of Generally Recognized As Safe (GRAS) ingredients and products of biotechnology relating to food.

Published Timely Food and Color Additive and Food Contact Substance Reviews
FDA has the primary legal responsibility for determining the safe use of food additives and color additives. To market a new food additive, color additive or food contact substance – or before using an additive already approved for one use in another manner not yet approved – a manufacturer or other sponsor must first petition FDA for its approval, a process that is unique to FDA's regulatory mission. In FY 2015, FDA ensured safe access to the food supply by reviewing 11 Food and Color Additive Petitions, 65 GRAS notifications, and 108 premarket notifications for Food Contact Substances.

Updated Risk Assessment Capabilities
FDA completed a review of how it evaluates the harmful effects of chemicals in foods, cosmetics, dietary supplements, animal food and feed, and veterinary drugs. FDA Centers, led by CFSAN, will continue the process of updating FDA's Toxicological Principles for the Safety Assessment of Food Ingredients – also called the "Redbook" – so that it reflects the most recent science. FDA's overarching goal in this effort is to develop a framework that incorporates the assessment of ingredients present in various products such as:

- food additives
- food contact substances
- ingredients that are generally regarded as safe (GRAS)
- new plant varieties
- dietary supplements and new dietary ingredients
- cosmetic ingredients
- unavoidable chemical contaminants other than microbial pathogens.

Additionally, the Centers will jointly develop a process to ensure consistency of methodologies used for safety and risk assessments within and across offices at CFSAN, and between CFSAN and CVM.

Promote Informed Decisions

The Foods Program is responsible for ensuring that foods sold in the United States are safe, wholesome, and properly labeled. The Nutrition Labeling and Education Act (NLEA) requires most packaged foods to bear nutrition labeling and requires food labels that bear nutrient content claims and certain health messages to comply with specific requirements.

The Foods Program also serves as FDA's primary organization for directing, developing, and coordinating web communications, outreach, and consumer education. FDA has statutory responsibility for food safety, and has jurisdiction over all domestic and imported food except meat, poultry, and processed egg products that fall under the authority of the U.S. Department of

Agriculture. Outreach is essential to ensure that consumers and food safety partners have the information needed to make informed decisions.

Updated Nutrition Facts Label
In FY 2014, the Foods Program published two proposed rules, one on updating the Nutrition and Supplement Facts labels, and one on updating FDA's serving size requirements for conventional foods. The proposal to update the Nutrition and Supplement Facts label reflects new public health and scientific information, including links between diet and chronic diseases such as obesity and heart disease. The proposal for updating FDA's serving size requirements incorporates new developments including the availability of newer consumption data, research showing that amounts of food consumed by the American public have changed, and recent consumer research on the use and understanding of the Nutrition Facts label. These proposals also feature a fresh design to highlight key parts of the label such as calories and serving sizes.

Proposed Rule for Gluten-Free Labeling of Fermented or Hydrolyzed Foods
In November 2015, FDA published a proposed rule to establish additional requirements for fermented, hydrolyzed, and distilled foods or ingredients that are labeled as "gluten-free." Hydrolyzed, fermented, or distilled foods voluntarily bearing the "gluten-free" claim must meet the requirements of the gluten-free food labeling final rule. , These requirements are necessary to ensure that manufacturers have a clear understanding of what is meant by "gluten free" and individuals with celiac disease receive truthful and accurate information about foods that are labeled with this term. Such foods include cheese, yogurt, vinegar, pickles, green olives, some beers and wines and foods containing hydrolyzed soy that is often used to enhance flavor or improve texture.

Menu Labeling Draft Guidance
In September 2015, FDA issued a draft guidance document to help companies comply with the menu labeling final rule. The Menu Labeling Regulation requires certain restaurants and similar retail food establishments selling restaurant-type foods to disclose calorie information on their menus and menu boards for standard menu items and to disclose calorie information for foods on display and self-service foods that are standard menu items. Additionally, covered establishments must have the required additional written nutrition information available upon consumer request on the premises of the covered establishment.

Labeling Food Containing Ingredients Derived from Genetically Engineered Sources
In November 2015, FDA released two guidance documents detailing the agency's current thinking on labeling of food derived from Atlantic salmon that has or has not been genetically engineered and a final guidance for labeling of food that has or has not been derived from GE plants to help those manufacturers who wish to voluntarily make the distinction on the labeling of their food products. Both guidance documents explain FDA's best thinking on how manufacturers who wish to provide such information can do so in a way that is truthful and not misleading.

Launched iRISK® 2.0

FDA released version 2.0 of FDA-iRISK®, a web-based tool whose automated features enable scientists and other food-safety professionals to conduct quantitative risk assessments more rapidly and to report results as key public-health metrics, among many other innovative features. The results inform risk managers' decisions about food-safety policy. The program allows users to compare and rank risks from foodborne hazards and to predict and compare the impact various interventions will have on public health. Examples of enhanced features of version 2.0 are advanced modeling and reporting methods, increased speed, and easier data-sharing. FDA-iRISK® 2.0 and related new documents are available on Foodrisk.org.[15]

FDA, in collaboration with Federal Partners, Developed Improved Method for Attributing Foodborne Illness

FDA, working with The Centers for Disease Control and Prevention (CDC) and the USDA's Food Safety Inspection Service (FSIS) developed an improved method for analyzing outbreak data to determine which foods are ultimately responsible for illnesses related to four major foodborne bacteria. The three agencies, operating as a partnership known as the Interagency Food Safety Analytics Collaboration (IFSAC), released a report titled "Foodborne Illness Source Attribution Estimates for Salmonella, Escherichia coli O157), Listeria monocytogenes (Lm), and Campylobacter using Outbreak Surveillance Data." The CDC estimates the four pathogens discussed in the report cause 1.9 million cases of foodborne illness in the United States each year.

The agencies anticipate that IFSAC's work will enhance their efforts to prevent foodborne illness. The new estimates will help shape agency priorities and support the development of new regulations and performance standards and measures. The recently developed method employs new food categories that align with those used to regulate food products and emphasizes more recent outbreak data. To arrive at these categories, IFSAC experts analyzed data from nearly 1,000 outbreaks in an effort to determine which categories of foods were most responsible for making people sick with Salmonella, E. coli O157, Listeria, and Campylobacter. The pathogens were chosen because of the frequency or severity of the illnesses they cause, and because targeted interventions can have a significant impact in reducing them.

FDA Announced Competitive Grant Program with NIFA to Fund Food Safety Training, Education and Technical Assistance

FDA joined with the U.S. Department of Agriculture's National Institute of Food and Agriculture (NIFA) in a collaborative partnership to administer and manage the National Food Safety Training, Education, Extension, Outreach, and Technical Assistance Program.

The grant program recognizes the importance of food safety training for small farm owners and food processors and will provide funding to these critical groups. The funds will assist these groups in receiving training, education, and technical assistance consistent with standards being established under FSMA. Priority for the grants will be given to entities training owners and

15 FDA i-Risk® 2.0 and related documents are available online at http://foodrisk.org/exclusives/fda-irisk-a-comparative-risk-assessment-tool/

operators of small and medium-size farms, farmers just starting out in the business, socially disadvantaged farmers, small food processors, small fruit and vegetable wholesalers, and farms that lack access to food safety training and other educational opportunities.

Among the entities eligible for funding are federal, state, or local agencies, state cooperative extension services, non-profit community based or non-governmental organizations, institutions of higher education, Tribes and tribal stakeholders, or a collaboration of two or more eligible entities.

FUNDING HISTORY

Fiscal Year	Program Level	Budget Authority	User Fees
FY 2013 Actual	$796,638,000	$796,638,000	$0
FY 2014 Actual	$882,814,000	$882,814,000	$0
FY 2015 Actual	$903,340,000	$903,340,000	$0
FY 2016 Enacted	$998,914,000	$987,328,000	$11,586,000
FY 2017 President's Budget	$1,195,067,000	$1,012,603,000	$182,464,000

BUDGET REQUEST

The FY 2017 Budget Request is $1,195,067,000, of which $1,012,603,000 is budget authority and $182,464,000 is user fees. The budget authority increases by $25,275,000 compared to the FY 2016 Enacted level and user fees increase by $170,878,000. This request will provide $355,956,000 to the Center for Food Safety and Applied Nutrition (CFSAN) and $839,111,000 to the Office of Regulatory Affairs (ORA).

The FY 2017 Budget will allow the Foods Program to continue its statutory mission of promoting and protecting public health by ensuring that the nation's food supply is safe, sanitary, and properly labeled, and that cosmetic products are safe and properly labeled. This mission becomes more challenging every year as globalization, advances in science and technology, and shifts in consumer expectations drive change throughout the human and animal food systems. In response to these increasing demands, the Foods Program conducts a variety of activities aimed at providing American consumers with food and cosmetics products that are safe and properly labeled.

The Foods Program will maintain current levels of operational activities to inspect regulated products and manufacturers, conduct sample analyses of regulated products, and review imported products offered for entry into the United States. FDA will continue to work with its state, local, tribal, territorial, and foreign counterparts to make the best use of all available public resources and improve program efficiency and effectiveness.

The Foods Program will continue its efforts to implement a risk-based approach towards food safety. FDA-iRISK® will be enhanced by increasing its capability and usability. FDA's compliance and enforcement activities will support the risk-based implementation of FSMA rules by utilizing new education, technical assistance, inspection, and enforcement strategies to gain compliance with new food safety standards. In order to better assess how the performance of the new FSMA prevention strategy and commodity-based and vertically integrated regulatory

programs may be enhanced, FDA will continue to evaluate its current regulatory and compliance activities, focusing on opportunities to improve risk-based resource targeting and efficiency.

The Foods Program will continue to enhance nutrition education by working with industry and other stakeholders Activities to improve nutritional quality of packaged and restaurant foods will continue in FY 2017 by implementing updated regulations for the Nutrition Facts Label, serving-size regulations for conventional foods, and regulations for calorie labeling for menus and vending machines. The new Nutrition Facts labels will enable consumers to base their food choices on up-to-date serving size and other information, with a focus on better understanding the calorie content per serving size of food.

BUDGET AUTHORITY

Food Safety: $1.0 billion (+$25.3 million)

Since FSMA was enacted, FDA has carried out extensive work to implement the law by publishing key FSMA rules that would provide needed food safety protections for the American public, while at the same time making the rules as flexible as possible and workable across the great diversity of the nation's food system. These rules were informed by current industry practices and extensive outreach and dialogue across the country and overseas with farmers, manufacturers, commercial food handlers, consumers, and government partners. FDA issued five key final FSMA rules in the fall of 2015, and plans to issue additional rules in the spring of 2016.

FDA received a significant funding increase for FSMA implementation in FY 2016 in anticipation of implementing the final rules. This funding is enabling FDA to maintain momentum toward successful implementation of FSMA but still leaves a significant gap in funding in two key areas: state funding for produce safety and ensuring the safety of imported food. Additional funding is needed in these areas, if FDA and the food system are to fully realize the public health and public confidence benefits promised by FSMA. FDA has begun crucial planning and taken initial steps to ensure successful implementation in the following areas: inspection modernization and associated FDA and state staff training; guidance development, education and technical assistance for industry; and establishing an import safety system that addresses problems before food from other countries reaches the U.S. border. With the requested increase for FSMA implementation in FY 2017, FDA plans the following activities:

National Integrated Food Safety System: Produce Safety +$11.3 million
Field: +$11.3 million

Building a national integrated food safety system is a central element of FSMA's mandate to FDA and crucial to successful implementation of FSMA. The FY 2017 request will build on the FY 2016 investments in this area. The request will be used primarily to support state capacity to implement the FSMA produce safety rule through funding of state cooperative agreements and grants.

FDA's implementation strategy for the FSMA produce safety rule depends on States being full partners with FDA and the primary frontline interface with growers to foster efficient compliance with the rule. In FY 2017, FDA and state efforts to implement the produce safety rule will focus on providing educational and technical assistance to industry, especially small and very small farming operations. This requires building the capacity and expertise that state

agencies involved in agriculture and food safety will need to deliver timely and effective education and technical assistance so that farmers can comply with the new produce safety rule. This funding will also build state capacity and continue planning for future inspections to ensure compliance.

Based on the FDA-state strategy of educating before we regulate, FY 2017 resources will also be used to conduct non-regulatory pre-assessments to help growers gauge their current compliance and improve as needed to comply with the new rule.

Neither FDA nor the states have existing programs for conducting on-farm inspections and the other on-farm support activities needed to successfully implement the produce safety provisions of FSMA. Given the states' willingness to partner with FDA and their comparative advantage due to their local presence, knowledge, and relationships with the farm community, FDA believes the states can provide this oversight and direct technical assistance more effectively and efficiently than FDA. The states have made it clear, however, that they cannot perform these functions without federal resources to supplement their current constrained capacity and resources.

Import Safety: +$14.0 million
Field: +$14.0 million

The requested funds will enable FDA to continue progress toward implementing the multifaceted new import safety system mandated by Congress. FDA will focus in FY 2017 on implementing the Foreign Supplier Verification Program (FSVP) rule, under which importers must verify that food they import into the United States has been produced in a manner consistent with FSMA's new standards for produce safety and preventive controls in food facilities. This preventive approach to import safety will improve food safety and consumer confidence in imported food but presents an enormous challenge for both FDA and food importers, given that approximately 90,000 consignees received food import shipments last year. The volume of imported food has increased enormously over the past 20 years, going from fewer than 200,000 line-entries in the early 1990s to over 13 million in FY 2015.

Building on the FY 2016 investment, FSVP will require further investment to:

- hire and train staff to perform FSVP inspections
- provide extensive training and technical assistance for importers
- provide outreach to foreign firms and foreign government partners on the new FSVP requirements.

To improve import safety, FDA will also expand its overseas presence, as mandated by FSMA. This expansion includes increasing and better targeting FDA inspections of foreign food facilities, as well as working with and assisting foreign governments to ensure the safety of food before it is imported by the United States.

Without effective FSVP implementation and greater FDA overseas presence, FDA will not be able to provide the assurances of import safety envisioned by FSMA. This outcome would present a threat to food safety and inhibit the U.S.'s ability to foster two-way trade in food commodities based on consumer and industry confidence in food safety.

USER FEES

Proposed User Fees: +$170.9 million

Proposed Food Import Fee: +$96.1 million
Center: +$10 million / Field: +$86.1 million

The Foods Program request for the proposed Food Import Fee is $96,096,000. Revenue from the proposed Food Import Fee would enable FDA to modernize its import oversight program in ways that would facilitate the entry of safe food.

The volume of imported food has increased enormously over the past 20 years, going from fewer than 200,000 line-entries in the early 1990s to over 13 million in FY 2015. A cascade of contaminated food incidents in recent years, such as bacterial contamination of fresh fruits and vegetables and illegal antibiotics in seafood, has resulted in public distrust of imported food and a belief that the Federal government is not taking adequate steps to ensure imported food safety.

Congress has repeatedly raised the issue of inadequate border screening of food, noting that in FY 2015 approximately two percent of imported food and feed entries were physically examined. The fundamental tenet of the FSMA import provisions is to design an import control strategy that does not solely depend on FDA reviews at the ports of entry but where such reviews are the final step in a comprehensive system of safeguards for improving the safety of the U.S. food supply, with importers responsible for far greater safety assurance responsibilities.

These resources will benefit foreign food producers, U.S. food importers, and the general public. For importers in particular, the fee will result in an improved import program resulting in greater efficiency and predictability for their businesses. The improvements to the import process will not only facilitate the entry of safe products but also improve public health by enabling FDA to focus its attention on higher risk products. The ultimate result will be improved confidence in the safety of food from abroad, thus encouraging future trade opportunities in food.

Importer Support
To improve the safety of imported food, FDA will establish new systems to prevent the import of unsafe foods earlier in the process rather than detaining a product at the border. Additional funds will support the establishment of a "Help Desk" that would assure importers of an available, responsive communications system to help address their concerns and answer their questions about the status of their shipments.

Port-of-Entry Streamlining
Food importers are increasingly complaining that FDA's current import screening process is hindering their ability to trade competitively. These funds will help develop and maintain improved risk analytics and IT systems that will allow FDA to target the highest risk imports, thus resulting in fewer detentions and less delay for lower-risk entries. This will include better integration with U.S. Customs and Border Protection (CBP) IT systems, as importers have urged, and continuous improvement of FDA's import screening system (PREDICT).

These systems will decrease reliance on paper notices and improve FDA's ability to exchange information electronically with industry during the import review process. These funds will also be used to expand the use of analytical tools deployed on-site for faster screening and better targeting of high-risk samples going to traditional laboratories for lengthy analysis. These tools will include technology such as hand-held scanners and small, portable on-site testing capability.

Resources will be invested in the implementation of a Quality Management System across all ports designed to improve uniformity and efficiency of the import decision process. The facilitation of continuous process improvements across all ports of entry will allow FDA to develop measures for quality service and manage import operations to those measures, resulting in greater uniformity and predictability across all FDA ports. A formal assessment will establish baseline measurements against which FDA and importers can evaluate improvements in import business operations as the user fee program is implemented.

Increased Border Staffing
Additionally, these funds will increase FDA border coverage and extend hours of operations at high-priority locations. The result will be fewer instances when FDA investigators are not available to process an entry and will make FDA's response timelier.

Proposed Food Facility Registration and Inspection Fee: +$51.6 million
Center: +$23.7 million / Field: +$27.9 million

Revenue from the proposed Food Facility and Registration Fee would enable FDA to fully modernize the FDA inspection program through the further development and implementation of new inspection models and tools. This includes training of FDA inspectors and compliance staff and their state counterparts in the new models and information technology to improve targeting and risk-based efficiency of inspection. This investment will complement the investment in inspection modernization and training that can be achieved with the budget authority request and ensue that modernization is fully achieved on a timely basis.

The fee revenue will also provide essential resources for investment in the state training and capacity needed to fully achieve the vision of a national integrated food safety system that provides high quality, consistent and coordinated food safety oversight nationwide. With this investment, FDA will be better able to make sustainable multi-year infrastructure investments to provide more uniform coverage and safety oversight of the food supply.

The resources allocated to planning and response will allow FDA to respond effectively and reduce adverse public health impacts when food safety problems emerge. This funding will support FDA's ability to enforce mandatory recall authority and respond immediately when a food company fails to voluntarily recall unsafe food. This investment will also improve FDA's ability to learn from outbreaks and other food safety incidents and thereby improve future prevention efforts.

Proposed Cosmetics Safety User Fee: +$17.7 million
Center: +$13.0 million / Field: +$4.7 million

FDA will use user fee funds to establish a Mandatory Cosmetic Registration Program (MCRP) that will require all domestic and foreign cosmetic labelers marketing products in the U.S. to register their establishments and products with FDA. FDA will provide information gathered from the complete listing of marketed cosmetic products and their ingredients to industry to assist it in its safety evaluations and product modifications. The user fees will also enable FDA to meaningfully participate in international harmonization efforts for cosmetic standards. With this investment, FDA will refine inspection and sampling of imported products and apply risk-based approaches to post-market monitoring of domestic and imported products, inspection, and other enforcement activities. As a result, FDA will be better positioned to fulfill its public health

mission and will promote greater safety and understanding of cosmetic products consumers regularly use.

Proposed Food Contact Substances Notification User Fee: +$4.7 million
Center: +$4.7 million

With resources funded by user fees, FDA will expand and develop the Food Contact Notification Program (FCN) to ensure stable, long-term viability of the current food contact substances authorization process. This stability and predictability is to the advantage of consumers, FDA, and the regulated industry because the FCN process is simpler, more efficient, and requires fewer resources than the alternative food additive petition process. The user fees will also support continued development and updates of industry guidance, including guidance to address emerging regulatory challenges associated with the use of nanotechnology and endocrine active chemicals in food contact materials. In addition, user fee funds will enable FDA to continue its preeminence in the regulatory science applicable to food contact materials, benefiting both U.S. consumers and industry.

Proposed International Courier User Fee: +$0.8 million
Field: +$0.8 million

Millions of shipments of food commodities enter the United States through express courier facilities, and the number continues to grow. These shipments are often destined for individual consumers or for illegal distribution. The user fee resources for this activity will allow increased import surveillance of FDA-regulated products at express courier hubs.

Current FDA staffing does not match the expected growth in import volume. Federal Express and other couriers have indicated that they expect a growth of over 60 percent in shipments during the next year, further taxing FDA resources. To address the growing volume of imports entering through international couriers, FDA is proposing to pay the cost of these import operations through a new user fee.

With this new user fee, FDA will:

- conduct entry reviews
- sample collections and physical exams to determine product admissibility into the United States
- initiate compliance actions to prevent release of unsafe products into U.S. commerce
- establish import controls to prevent future unsafe products from entering U.S. commerce.

PERFORMANCE

The Foods Program's performance measures focus on premarket application review, incidence of foodborne pathogens, regulatory science activities, and postmarket inspection and import screening activities in order to ensure the safety and proper labeling of the American food supply and cosmetics, as detailed in the following table.

Measure	Year and Most Recent Result / Target for Recent Result (Summary of Result)	FY 2016 Target	FY 2017 Target	FY 2017 +/- FY 2016
213301: Complete review and action on the safety evaluation of direct and indirect food and color additive petitions, within 360 days of receipt. (*Output)*	FY 2015: 100% Target: 80% (Target Exceeded)	80%	80%	maintain
214101: Number of state, local, and tribal regulatory agencies in the U.S. and its Territories enrolled in the draft Voluntary National Retail Food Regulatory Program Standards. *(Outcome)*	FY 2015: 667 enrolled Target: 638 enrolled (Target Exceeded)	682	697	+15
212404: Reduce the incidence of infection caused by key pathogens commonly transmitted by food: *Campylobacter* species. (*Outcome)*	CY 2014: 13.45 cases/100,000 CY 2014 Target: 11.4 cases/100,000 (Target Not Met)	10.6 cases/ 100,000	10.2 cases/ 100,000	-0.4
212405: Reduce the incidence of infection caused by key pathogens commonly transmitted by food: Shiga toxin-producing *Escherichia coli* O157:H7. (*Outcome)*	CY 2014: 0.92 cases/100,000 CY 2014 Target: 1.00 cases/100,000 (Target Exceeded)	0.89 cases/ 100,000	0.83 cases/ 100,000	-0.06
212407: Reduce the incidence of infection caused by key pathogens commonly transmitted by food: *Salmonella* species. (*Outcome)*	CY 2014: 15.45 cases/100,000 CY 2014 Target: 13.9 cases/100,000 (Target Not Met)	13.2 cases/ 100,000	12.8 cases/ 100,000	-0.4

Measure	Year and Most Recent Result / Target for Recent Result (Summary of Result)	FY 2016 Target	FY 2017 Target	FY 2017 +/- FY 2016
212410: Reducing foodborne illness in the population. By December 31, 2017, working with federal, state, local, tribal, and industry partners, improve preventive controls in food production facilities and reduce the incidence rate (reported cases per 100,000 population per year) of *Listeria monocytogenes (Lm)* infections by 8%. (Outcome)	CY 2014: .24 cases/100,000 (Historical Actual)	NA	.22 cases/ 100,000	NA
214306: The average number of working days to serotype priority pathogens in food (Screening Only) (*Output)*	FY 2015: 3 working days Target: 4 working days (Target Exceeded)	3 working days	3 working days	maintain
214201: Number of prior notice import security reviews. *(Output)*	FY 2015: 80,990 Target: 80,000 (Target Exceeded)	80,000	80,000	maintain
214202: Number of import food field exams. *(Output)*	FY 2015: 174,432 Target: 160,000 (Target Exceeded)	160,000	160,000	maintain
214203: Number of Filer Evaluations. (Output*)*	FY 2015: 1,212 Target: 1,000 (Target Exceeded)	1,000	1,000	maintain
214204: Number of examinations of FDA refused entries. *(Output)*	FY 2015: 8,527 Target: 7,000 (Target Exceeded)	7,000	7,000	maintain
214206: Maintain accreditation for ORA labs. *(Outcome)*	FY 2015: 13 labs Target: 13 labs (Target Met)	13 labs	13 labs	maintain
214209: As required by the FSMA Legislation, cover 100% of the High Risk domestic inventory (approximately 19,500 firms) every three years. *(Output)*	FY 2015: 80% Target: 66% (Target Exceeded)	100%	33%	+33%

Measure	Year and Most Recent Result / Target for Recent Result (Summary of Result)	FY 2016 Target	FY 2017 Target	FY 2017 +/- FY 2016
214305: Increase laboratory surge capacity in the event of terrorist attack on the food supply. (Radiological and chemical samples/week). *(Outcome)*	FY 2015: 2,500 rad & 2,100 chem Target: 2,500 rad & 2,100 chem (Target Met)	2,500 rad & 2,100 chem	2,500 rad & 2,100 chem	maintain

The following selected items highlight notable results and trends detailed in the performance table.

Food Additive and Color Additive Petition Review
The Foods Program conducts an extensive review as part of its Food Additive and Color Additive Petition review process, which includes a Chemistry, Toxicology and Environmental evaluation. The current measure requires FDA to complete review and action on the safety evaluation of direct and indirect food and color additive petitions within 360 days of receipt. FDA exceeded the FY 2015 target of 80% by reviewing and completing 100% of the petitions received within 360 days of receipt, a result consistent with the FY 2014 performance of 100% completed within the same timeframe.

Voluntary National Retail Food Regulatory Program Standards
Strong and effective regulatory programs at the state, local and tribal level are needed to prevent food borne illness and reduce the occurrence of food borne illness risk factors in retail and foodservice operations. The voluntary use of the Retail Program Standards by a food inspection program reflects a commitment toward continuous improvement and the application of effective risk-based strategies for reducing food borne illness. The FY 2015 target for enrollment of State, local and tribal agencies in the Retail Program Standards was far exceeded. Awareness of the value of the using the Retail Program Standards to drive program improvement continues to grow, particularly among local health departments. In addition, more retail food regulatory programs are recognizing that FDA cooperative agreement funds are available to jurisdictions that enroll in the Retail Program Standards and commit to achieving key milestones. The FY 2016 and FY 2017 targets reflect increases in the number of enrollees by 15 above the previous year's actual number of enrollees or target.

Foodborne Illness
FDA's Priority Goal to reduce foodborne illness is a long-term outcome goal that reflects FDA's efforts, along with our partners in CDC and NIH, to decrease the rate of *Listeria monocytogenes (L.m.)*. *Listeria monocytogenes (L.m.)* infections are one of the leading causes of death from foodborne illness in the United States, resulting in an estimated 1,600 illnesses and 260 deaths each year. With enactment of the 2011 Food Safety Modernization Act (FSMA), Congress mandated a paradigm shift to prevention – to establishing a modern system of food safety protection based not on reacting to problems, but on preventing them from happening in the first place. Over the next two years, concentrated efforts to 1) improve preventative controls through inspections and technical guidance to industry, 2) improve surveillance and detection using

whole genome sequencing of *L.m.* isolates, and 3) improve response by more accurately linking illnesses and outbreaks to the food that caused the illness, should lead to a reduction in the overall *L.m.* rate.

Pathogen Detection

FDA microbiologists are evaluating and integrating commercially available instrumentation into its microbiological testing workflow that is vastly improving the ability of FDA to more quickly and effectively detect and characterize foodborne pathogens such as Salmonella directly from the food supply. Improvements in sample throughput, along with the high degree of sensitivity and specificity built into new pathogen detection technologies, will dramatically improve FDA's foodborne response and traceback capabilities. When fully deployed, technologies such as next-generation whole-genome sequencing (WGS) and others will reduce the time to conduct these analyses from 14 days originally to just a few days. One updated technology which provides highly accurate and rapid Salmonella serotype results for FDA, known as the flow cytometry/fluorescence platform, has been validated extensively and is now deployed in nearly all FDA field laboratories, as well as in CFSAN and CVM laboratories. In FY 2015, FDA exceeded the target of four working days, reducing the average number of days to serotype priority pathogens in foods to three working days, which is the minimum amount of time required. The proposed target for FY 2016 and FY 2017 is three working days, which will maintain the level achieved in FY 2015.

FSMA High Risk Domestic Inspection Coverage

FDA is committed to ensuring that the U.S. food supply continues to be among the safest in the world. ORA plays a critical role in the implementation of FSMA; and the importance of complying with high-risk domestic inspections mandated by FSMA legislation. FSMA legislation requires inspecting 100 percent of the high-risk domestic inventory every three years. This goal serves to cumulatively track the progress over the three year period as the coverage of inventory approaches the FSMA requirement of 100 percent. FY 2015 marked year two of the three-year cycle, and ORA has made significant progress by inspecting 80% of the total cumulative high-risk domestic inventory. The FY 2016 target is set at 100% and closes the three year cycle. FY 2017 marks the beginning of the next three year cycle, and while the target returns to 33% to signify the first third of the inventory, the delta shows that it is still an increase of 33% because of the new three year cycle.

Laboratory Surge Capacity

A critical component of controlling threats from deliberate food-borne contamination is the ability to rapidly test large numbers of samples of potentially adulterated foods for the presence of contaminants. Improvements in surge capacity will have public health value even in non-deliberate food contamination by assisting FDA in identifying and removing contaminated food products from the marketplace as soon as possible in order to protect the public health and mitigate disruption in the U.S. food supply chain.

PROGRAM ACTIVITY DATA

Foods Program Activity Data

CFSAN Workload and Outputs	FY 2015 Actual	FY 2016 Estimate	FY 2017 Estimate
Food and Color Additive Petitions			
Petitions Filed [1]	10	7	7
Petitions Reviewed [2]	11	7	7
Premarket Notifications for Food Contact Substances			
Notifications Received	108	130	130
Notifications Reviewed [3]	108	128	128
Infant Formula Notifications			
Notifications Received [4]	37	40	40
Notifications Reviewed [5]	35	40	40
FDA Review Time	90 days	90 days	90 days
New Dietary Ingredient Notifications			
Notifications Received [6]	35	55	60
Notifications Reviewed [7]	35	55	60
FDA Review Time	75 days	75 days	75 days

[1] This number is for the cohort of petitions filed in the FY.

[2] Number reviewed includes petitions approved, withdrawn, or placed in abeyance due to deficiencies during the FY.

[3] Number reviewed includes notifications that became effective or were withdrawn.

[4] A notification may include more than 1 infant formula.

[5] Number of submissions reviewed includes some submissions that were received in the previous FY.

[6] Number of submissions received in current FY includes some received late in the FY that are expected to be completed in the next FY when the due date occurs.

[7] Number of submissions reviewed in the current FY includes some submissions that were received in the previous FY when the due date occurred in the current FY.

Field Foods Program Activity Data (PAD)

Field Foods Program Workload and Outputs	FY 2015 Actuals	FY 2016 Estimate	FY 2017 Estimate
FDA WORK			
DOMESTIC INSPECTIONS			
UNIQUE COUNT OF FDA DOMESTIC FOOD ESTABLISHMENT INSPECTIONS	***7,334***	***8,500***	***8,500***
Domestic Food Safety Program Inspections	5,078	Activities no longer planned to this level due to enactment of FSMA and alignment of resources into only high and low risk categories.	Activities no longer planned to this level due to enactment of FSMA and alignment of resources into only high and low risk categories.
Imported and Domestic Cheese Program Inspections	220		
Domestic Low Acid Canned Foods/ Acidified Foods Inspections	325		
Domestic Fish & Fishery Products (HACCP) Inspections	979		
Import (Seafood Program Including HACCP) Inspections	331		
Juice HACCP Inspection Program (HACCP)	195		
Interstate Travel Sanitation (ITS) Inspections	897		
Domestic Field Exams/Tests	2,154	3,945	3,945
Domestic Laboratory Samples Analyzed	13,157	11,300	11,300
FOREIGN INSPECTIONS			
UNIQUE COUNT OF FDA FOREIGN FOOD ESTABLISHMENT INSPECTIONS [1]	***1,357***	***1,200***	***1,200***
All Foreign Inspections	1,357	1,200	1,200
TOTAL UNIQUE COUNT OF FDA FOODS ESTABLISHMENT INSPECTIONS	***8,691***	***9,700***	***9,700***
IMPORTS			
Import Field Exams/Tests	245,804	160,200	160,200
Import Laboratory Samples Analyzed	21,128	35,300	35,300
Import Physical Exam Subtotal	**266,932**	**195,500**	**195,500**
Import Line Decisions	13,080,429	13,718,926	14,388,591
Percent of Import Lines Physically Examined	2.04%	1.43%	1.36%
Prior Notice Security Import Reviews (Bioterrorism Act Mandate)	80,990	80,000	80,000
STATE WORK			
UNIQUE COUNT OF STATE CONTRACT FOOD ESTABLISHMENT INSPECTIONS	***9,277***	***10,523***	***10,523***
UNIQUE COUNT OF STATE PARTNERSHIPS FOOD ESTABLISHMENT INSPECTIONS	***88***	***273***	***273***
State Contract Food Safety (Non HACCP) Inspections	8,225	9,318	9,318
State Contract Domestic Seafood HACCP Inspections	973	1,104	1,104
State Contract Juice HACCP	79	103	103
State Contract LACF	111	68	68
State Partnership Inspections	88	273	273
State Contract Foods Funding	$12,706,038	$13,087,219	$13,479,836
Number of FERN State Laboratories	19	19	19
Number of Food Safety State Laboratories	15	15	15
Annual FERN State Cooperative Agreements/Operations Funding	$20,701,071	$21,322,103	$21,961,766
Total State & Annual FERN Funding	**$33,407,109**	**$34,409,322**	**$35,441,602**
GRAND TOTAL FOOD ESTABLISHMENT INSPECTIONS	***18,056***	***20,496***	***20,496***

[1] The FY 2015 actual unique count of foreign inspections includes 150 OIP inspections (65 for China, 65 for India, & 20 for Latin America).

Field Cosmetics Program Activity Data (PAD)

Field Cosmetics Program Workload and Outputs	FY 2015 Actuals	FY 2016 Estimate	FY 2017 Estimate
FDA WORK			
DOMESTIC INSPECTIONS			
UNIQUE COUNT OF FDA COSMETICS ESTABLISHMENT INSPECTIONS	***88***	***100***	***100***
Domestic Inspections	88	100	100
FOREIGN INSPECTIONS			
UNIQUE COUNT OF FDA COSMETICS ESTABLISHMENT INSPECTIONS	***3***	***0***	***0***
Foreign Inspections	3	0	0
IMPORTS			
Import Field Exams/Tests	17,133	1,600	1,600
Import Laboratory Samples Analyzed	488	500	500
Import Physical Exam Subtotal	**17,621**	**2,100**	**2,100**
Import Line Decisions	2,930,682	3,111,524	3,303,525
Percent of Import Lines Physically Examined	0.60%	0.07%	0.06%
GRAND TOTAL COSMETICS ESTABLISHMENT INSPECTIONS	***91***	***100***	***100***

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HUMAN DRUGS

(Dollars in Thousands)	FY 2015 Final	FY 2015 Actuals	FY 2016 Enacted	FY 2017 President's Budget	FY 2017 +/- FY 2016
Human Drugs	**1,338,599**	**1,369,889**	**1,394,827**	**1,408,023**	**13,196**
Budget Authority	***482,287***	***482,243***	***491,503***	***491,503***	---
User Fees	***856,312***	***887,646***	***903,324***	***916,520***	***13,196***
Center	1,135,258	1,193,483	1,189,531	1,200,581	11,050
Budget Authority	346,080	346,045	355,296	354,856	-440
User Fees	789,178	847,438	834,235	845,725	11,490
Prescription Drug (PDUFA)	*561,252*	*588,892*	*601,643*	*608,835*	7,192
Generic Drug (GDUFA)	*211,625*	*256,254*	*215,867*	*219,740*	3,873
Biosimilars (BsUFA)	*15,900*	*1,896*	*16,298*	*16,706*	408
Outsourcing Facility	*401*	*396*	*427*	*444*	17
Field	203,341	176,406	205,296	207,442	2,146
Budget Authority	136,207	136,198	136,207	136,647	440
User Fees	67,134	40,208	69,089	70,795	1,706
Prescription Drug (PDUFA)	*11,453*	*6,028*	*12,276*	*12,423*	147
Generic Drug (GDUFA)	*54,083*	*34,180*	*55,167*	*56,158*	991
Biosimilars (BsUFA)	*1,348*	---	*1,382*	*1,416*	34
Outsourcing Facility	*250*	---	*264*	*277*	13
International Courier	---	---	---	*521*	521
FTE	**5,341**	**5,299**	**5,530**	**5,539**	**9**

Authorizing Legislation: Federal Food, Drug, and Cosmetic Act (21 U.S.C. 321-399); Public Health Service Act of 1944 (42 U.S.C. 201); Federal Advisory Committee Act (FACA) of 1972 as amended; Orphan Drug Act of 1983 (21 U.S.C. 360ee); Drug Price Competition and Patent Term Restoration Act of 1984 (Section 505(j) 21 U.S.C. 355(j)) (a.k.a. "Hatch Waxman Act"); Prescription Drug Marketing Act (PDMA) of 1987 (21 U.S.C. 353); Anti-Drug Abuse Act of 1988; Clinical Laboratory Improvement Amendments of 1988 (42 U.S.C. 201); Orphan Drug Amendments of 1988; Generic Drug Enforcement Act of 1992; Prescription Drug User Fee Act (PDUFA) of 1992; FDA Export Reform and Enhancement Act of 1996; Food and Drug Administration Modernization Act (FDAMA) of 1997; Public Health Security and Bioterrorism Preparedness and Response Act of 2002; Best Pharmaceuticals for Children Act (BPCA) of 2002; Freedom of Information Act (FOIA) as amended in 2002 (5 U.S.C. § 552); Pediatric Research Equity Act (PREA) of 2003; Project Bioshield Act of 2004 (21 U.S.C. 360bbb-3); Food and Drug Administration Amendments Act (FDAAA) of 2007; Public Health Service Act of 2010 (42 U.S.C. 262); Protecting Patients and Affordable Care Act of 2010; Food and Drug Administration Safety and Innovation Act of 2012 (FDASIA); Drug Quality and Security Act (2013); Sunscreen Innovation Act (2014); Adding Ebola to the FDA Priority Review Voucher Program Act (2014)

Allocation Methods: Direct Federal/Intramural

PROGRAM DESCRIPTION AND ACCOMPLISHMENTS

FDA's Human Drugs Program is responsible for ensuring the safety and efficacy of new, generic, and over-the-counter (OTC) drug products, monitoring marketed drug products to ensure patient safety, and monitoring drug quality. The Center for Drug Evaluation and Research (CDER) and the Office of Regulatory Affairs (ORA) field drugs program are the components of FDA's Human Drugs Program, which operates with funding from budget authority and user fees.

The Program's mission is to promote and protect public health by helping to ensure that human drugs are safe and effective for their intended use, that they meet established quality standards, and that they are available to patients. The Human Drugs Program supports the FDA priorities of improving health care quality and reducing health care costs.

The following selected accomplishments demonstrate the Human Drugs Program's delivery of its regulatory and public health responsibilities within the context of current priorities.

Improve and Safeguard Access

Within this Goal area, the Human Drugs Program addresses the FDA Strategic Priorities including Regulatory Science, Globalization, Safety and Quality, and Smart Regulation.

The goal of the Human Drugs Program is to promote the public health by ensuring that prescription and over the counter (OTC) human drug products, including brand and generic products, are safe and effective. In addition, FDA aims to ensure that novel prescription drugs become available in a timely manner without compromising high standards of safety and efficacy.

In calendar year 2015, FDA's CDER approved 45 novel new drugs. From 2006 through 2014, CDER has averaged about 28 novel new drug approvals per year. Novel new drugs are often innovative products that serve previously unmet medical needs or otherwise significantly help to advance patient care and public health.

The Human Drugs Program employs a variety of regulatory tools including FDA's expedited development and review programs – fast track, priority review, accelerated approval, and new breakthrough therapy designation. Early and repeated communications with sponsors have also been helpful in expediting these products to market.

FDA is working to increase the speed and efficiency in several areas in the clinical trial phase of drug development. FDA's efforts include:

- accepting flexible clinical development designs
- meeting frequently and working closely with industry sponsors throughout the development process to plan efficient clinical trial programs and agree on needed data
- helping create clinical trial networks and "master protocols," where appropriate, to greatly reduce the cost of conducting clinical trials and reduce the time needed to carry them out.

FDASIA Implementation

FDA's recent accomplishments include implementing several components of the Food and Drug Safety and Innovation Act of 2012 (FDASIA). Accomplishments include publishing a final rule implementing Section 708 of FDASIA in FY 2015. This authority allows FDA to protect the public health by providing an administrative process for the description of certain drugs refused for import into the United States, thus increasing the integrity of the drug supply chain.

Accomplishments also include publishing the Strategic Plan for Preventing and Mitigating Drug Shortages.[16]

[16] http://www.fda.gov/downloads/Drugs/DrugSafety/DrugShortages/UCM372566.pdf

Drug shortages can delay or deny needed care for patients. Drugs in short supply may also lead health care professionals to rely on alternative drug products, which may be less effective or associated with higher risks than the drug in shortage.

In March 2015, as a part of the Strategic Plan for Preventing and Mitigating Drug Shortages, FDA launched the agency's first mobile application specifically designed to speed public access to valuable information about drug shortages. The mobile application, developed to improve public access to information, identifies current drug shortages, resolves drug shortages and discontinuations of drug products.

FDA has continued implementation of two user fee programs under FDASIA – the Generic Drug User Fee Amendments (GDUFA) and the Biosimilars User Fee Act (BsUFA) – as well as the fifth authorization of the Prescription Drug User Fee Act (PDUFA V). GDUFA and BsUFA continue to deliver tremendous public health benefits resulting from the availability of generic drugs and biosimilar biological products which provide patients with more affordable treatments. PDUFA V ensures FDA will continue to receive consistent funding from FY 2013 through FY 2017, enhancing its capacity to fulfill its mission of bringing novel drug products for patients to the market.

One of the key programs under PDUFA V has been the new molecular entity (NME) review program (the Program). Under PDUFA V, FDA has established a modified review program for NME New Drug Applications (NDAs) and original Biologics License Application (BLAs) received from October 1, 2012, through September 30, 2017. The goals of the Program are to increase the efficiency and effectiveness of the first review cycle and decrease the number of review cycles necessary for approval. The Program provides new opportunities for communication between applicants and the FDA review team during the FDA's review of these highly complex applications and additional review time for FDA and applicants to address review activities that occur late in the review cycle.

As of September 30, 2014, FDA has received more than 100 applications through the Program, which involves a more interactive review with applicants. All of the FY 2014 program cohort applications that received actions by September 30, 2014, were acted on within the goal date. The FY 2013 program cohort is nearly closed, and 96 percent of applications were acted on within the goal date. FDA will continue to focus on these highly innovative products that represent important new medicines for the American people.

Generic Drug Review

Generic drug review is a high priority for the Human Drugs Program, and the review function supports the larger FDA mission of promoting and protecting public health. With increasing healthcare costs, many Americans face challenges in accessing medically necessary drug products.

The passage of the Generic Drug User Fee Amendments of 2012 (GDUFA) brought high expectations for the timely review of human generic drug applications, creating risk-based parity between inspections of domestic and foreign firms, and reducing the backlog (i.e., applications pending prior to the implementation of GDUFA on October 1, 2012) of human generic drug applications. Pursuant to GDUFA's design, FDA has restructured the generic drug program. The GDUFA restructuring through FY 2015, was a deep, foundational transformation which has

prepared FDA to meet the goal dates for generic drug applications received.[17] The restructuring of the program included the hiring and training of many new employees, replacing fragmented information technology systems with a new integrated system, and substantially enhancing review and business processes.

FDA's efforts to lay the foundation for a modern generic drug program have positioned the Agency to meet goals through the end of GDUFA I, September 30, 2017. FDA has acted on over 80 percent of the GDUFA backlog applications and should achieve the 90 percent goal before the end of the program. FDA has not missed a GDUFA goal to date, and the Agency has gone above and beyond what was agreed upon in the GDUFA Commitment Letter,[18] exceeding some goals and providing additional guidance and communications to industry.

FDA will continue modernizing the generic drug program by focusing efforts on improving the efficiency, quality, and predictability of the human generic drug program ensuring that Americans have timely access to safe, effective, high quality, and low cost human generic drugs.

Biosimilars

BsUFA supports the review process for biosimilar biological products. The Biosimilar Product Development (BPD) Program was created as a part of BsUFA to provide a mechanism and structure for the collection of development-phase user fees to support FDA's biosimilar review program activities. BsUFA also includes the collection of original and supplemental application user fees, and product and establishment fees. As of November 30, 2015, 59 programs were in the Biosimilar Product Development (BPD) Program. CDER has received meeting requests to discuss the development of biosimilar products for 18 different reference products. In March 2015, FDA approved Zarxio, the first biosimilar product approved in the United States. Zarxio, which is biosimilar to the biological product Neupogen, is a medication that boosts the production of white blood cells and helps to ward off infection in patients receiving strong chemotherapy for some tumors. This significant accomplishment represents the next step to increasing treatment options for patients.

In FY 2015, FDA finalized three guidances: "Scientific Considerations in Demonstrating Biosimilarity to a Reference Product;" "Quality Considerations in Demonstrating Biosimilarity of a Therapeutic Protein Product to a Reference Product;" and "Biosimilars: Questions and Answers Regarding Implementation of the Biologics Price Competition and Innovation Act of 2009." These were published in April 2015 and are part of the series to implement the BPCI. FDA also issued draft guidance in May 2015, "Biosimilars: Additional Questions and Answers Regarding Implementation of the Biologics Price Competition and Innovation Act of 2009," providing new and revised questions and answers from sponsors interested in developing proposed biosimilar products.

In addition, FDA issued in August 2015 draft guidance for industry, "Nonproprietary Naming of Biological Products," which, when finalized, will describe how biological products licensed under the Public Health Service Act (PHS Act) should be named. The draft guidance describes FDA's current thinking that shared nonproprietary names are not appropriate for all biological products. FDA believes that both previously licensed and newly licensed originator biological

[17] http://www.fda.gov/downloads/ForIndustry/UserFees/GenericDrugUserFees/UCM282505.pdf.
[18] For a full description of the FDA's goals see the GDUFA Commitment Letter. For a full description of FDA's performance under GDUFA, see http://www.fda.gov/ForIndustry/UserFees/GenericDrugUserFees/default.htm
for the annual Performance Reports to the Congress on the Generic Drug User Fee Amendments.

products (such as the reference product), related biological products, and biosimilar products should have nonproprietary (or proper) names that include a core drug substance name and, in order to better identify each product, an FDA-designated suffix that is unique for each product. FDA sought comment on whether the nonproprietary name of interchangeable biological products should include a distinct suffix or should share the same suffix as its reference product.

Along with the draft guidance, FDA issued a proposed rule, "Designation of Official Names and Proper Names for Certain Biological Products." This proposed rule would designate nonproprietary names that include a suffix for six previously licensed biological products.

Ebola Response

Since August 2014, FDA has collaborated with other Department of Health and Human Services partner Agencies, product developers, and international partners to respond to the Ebola Virus Disease epidemic in West Africa by contributing to policy development, providing regulatory guidance and feedback on proposals for clinical trials, expediting the review of Investigational New Drug Applications (INDs), and working to uphold product quality and to carry out monitoring and enforcement activities related to potential counterfeit products. FDA worked to contribute to access to investigational Ebola medical countermeasures, including drugs, vaccines, and diagnostic tests, including encouraging development of appropriate clinical trials, authorizing the use of nine investigational diagnostic tests for Ebola under FDA's Emergency Use Authorization authority, and assisting with access to investigational treatments under expanded access, if appropriate, when clinical trials were not otherwise available to evaluate these products.

Opioids

Opioids are powerful medications that can help manage pain when prescribed for the right condition and when used properly. But when physicians prescribe these medications to patients who should not receive them, or when these medications are used improperly or for recreational purposes, they can cause serious harm including overdose and death. FDA continues to encourage the development of opioid products with abuse-deterrent properties and believes that these products have promise to help reduce prescription drug abuse. Additionally, the Agency is encouraging development of non-opioid therapies for chronic pain, and has approved a number of them. FDA remains committed to ensuring that patients with pain have appropriate access to opioid analgesics where they are the best option.

In April 2015, FDA issued the final guidance "Abuse-Deterrent Opioids – Evaluation and Labeling." The science of abuse-deterrent technology is still relatively new and evolving and the final guidance is intended to assist drug makers who wish to develop opioid drug products with potentially abuse-deterrent properties.

In October 2014, FDA hosted a public meeting to discuss the development, assessment, and regulation of abuse-deterrent opioid medications. The meeting focused on scientific and technical issues related to the development and in vitro assessment of these products, as well as FDA's approach towards assessing the benefits and risks of all opioid medications, including those with abuse-deterrent properties.

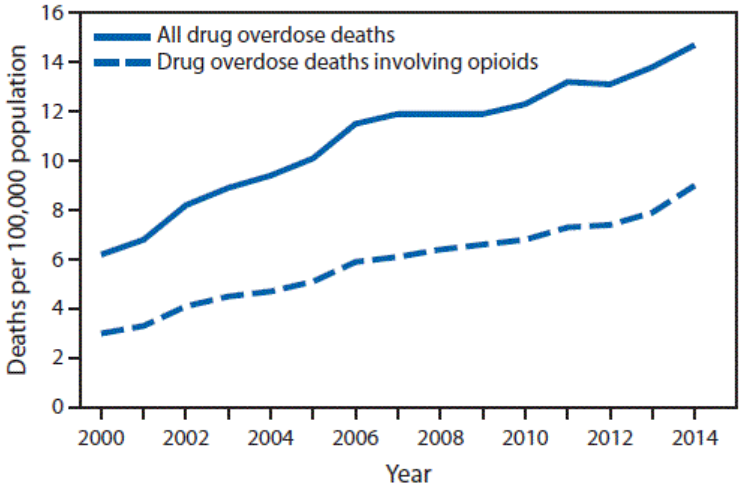
Since 2012, FDA has had in place an approved Risk Evaluation and Mitigation Strategy (REMS) for extended-release/long-acting (ER/LA) Opioid Analgesic intended to reduce serious adverse outcomes resulting from inappropriate prescribing. The central component of the ER/LA opioid analgesics REMS is an education program for prescribers (e.g., physicians, nurse practitioners,

physician assistants). Prescriber education includes drug information on ER/LA opioid analgesics; information on assessing patients for treatment with these drugs; initiating therapy, modifying dosing, and discontinuing use of ER/LA opioid analgesics; managing therapy and monitoring patients; and counseling patients and caregivers about the safe use of these drugs.

FDA is working with many drug makers to support advancements in this area and helping them navigate the regulatory path to market as quickly as possible. In working with industry, FDA will take a flexible, adaptive approach to the evaluation and labeling of potentially abuse-deterrent products.

FDA also remains committed to facilitating access to naloxone, a drug that rapidly reverses the effects of opioid overdose. In April 2014, the Agency approved the first auto-injector naloxone product, Evzio, and in November, 2015, FDA approved the first intranasal formulation of naloxone. Traditionally, approved forms of naloxone had been administered by trained personnel via syringe in ambulance or emergency care settings. The approved auto-injector product, however, may be administered by family members or caregivers, and thus may enable rapid and more wide-spread access to this lifesaving drug. Additionally, in July 2015, FDA held a scientific workshop to initiate a public discussion about issues surrounding the uptake of naloxone in certain medical settings – such as on ambulances and in association with prescriptions for opioids – as well as outside of conventional medical settings to reduce the incidence of opioid overdose fatalities. At the meeting, stakeholders explored legal, regulatory, logistical and clinical aspects related to making naloxone more widely available, and discussed how public health groups can work together to use naloxone to reduce the risk of overdose.

Age-adjusted rate[19] of drug overdose deaths[20]† and drug overdose deaths involving opioids[21, 22] — United States, 2000–2014



Source: National Vital Statistics System, Mortality file.

19 Age-adjusted death rates were calculated by applying age-specific death rates to the 2000 U.S. standard population age distribution.
20 Drug overdose deaths are identified using International Classification of Diseases, Tenth Revision underlying cause-of-death codes X40–X44, X60–X64, X85, and Y10–Y14.
21Drug overdose deaths involving opioids are drug overdose deaths with a multiple cause-of-death code of T40.0, T40.1, T40.2, T40.3, T40.4, or T40.6. Approximately one fifth of drug overdose deaths lack information on the specific drugs involved. Some of these deaths might involve opioids.
22 Opioids include drugs such as morphine, oxycodone, hydrocodone, heroin, methadone, fentanyl, and tramadol.

Combating Antibiotic Resistant Bacteria

Antibiotic resistance is poised to worsen due to the selective pressure from the use of existing antibacterial drugs, coinciding with a marked decline in innovative antibacterial drug development. Patients and clinicians are increasingly confronting infections caused by pathogens resistant to many or all antibacterial drugs in both the inpatient and outpatient settings. Antibacterial products face high development costs, particularly for late-stage clinical trials, but additional factors can complicate conduct of clinical trials for antibacterial drugs. For example, patients with serious infections are likely to be acutely ill and in need of urgent therapy, which can preclude efficient consent and timely trial enrollment procedures. In addition, many patients with serious drug-resistant infections have significant comorbidities that may render them less likely to meet inclusion criteria, thus precluding study enrollment.

Advancing the science of clinical trials for antibacterial drugs can have an impact in facilitating as well as stimulating development of needed, new therapies. FDA will continue its efforts to:

- streamline clinical trial protocols
- continue endpoint development
- develop novel clinical trial designs
- facilitate the establishment of a clinical trial network.

Important to this work will be engaging stakeholders in the area of antibacterial drug development. In addition, sustained funding would allow CDER to explore pharmacological strategies in drug development to prevent the emergence of resistance to new antibacterial drugs and continue refining ways to increase efficiencies of and knowledge gained from clinical trials.

Guidances

Below are notable guidances issued by FDA in 2015. These guidances help address various issues. This list reflects the guidances published most recently and does not represent any degree of importance or priority ranking among the published guidances.[23]

Date	#	Title	Description
Nov 2015	FDA-2015-D-3990	Sunscreen Innovation Act: Section 586C(c) Advisory Committee Process	Includes recommendations related to requests seeking a determination on whether a nonprescription sunscreen active ingredient is generally recognized as safe and effective and should be included in the OTC sunscreen drug monograph.
Nov 2015	FDA-2015-D-4021	Over-The-Counter Sunscreens: Safety and Effectiveness Data Guidance for Industry	Addresses FDA's current thinking about the safety and effectiveness data needed to determine whether a nonprescription sunscreen active ingredient is generally recognized as safe and effective (GRASE) and not misbranded when used under specified conditions.

[23] For more information on guidance please visit http://www.fda.gov/RegulatoryInformation/Guidances/.

Date	#	Title	Description
Nov 2015	FDA-2015-D-4012	Sunscreen Innovation Act: Withdrawal of a 586A Request or Pending Request	Informs manufacturers of nonprescription drug products containing acetaminophen that FDA will not object to inclusion of a liver warning if the warning appears as described in the guidance.
Nov 2015	FDA-2015-D-4033	Nonprescription Sunscreen Drug Products - Content and Format of Data Submissions to Support a GRASE Determination Under the Sunscreen Innovation	Addresses FDA's current thinking on how we will determine whether a sponsor's submission of safety and efficacy data is sufficiently complete to support a substantive review and determination that an active ingredient is or is not generally recognized as safe and effective for use in nonprescription sunscreen products.
Nov 2015	FDA-2013-D-0286	Formal Meetings Between the FDA and Biosimilar Biological Product Sponsors or Applicants	Provides recommendations to industry on formal meetings between FDA and sponsors or applicants relating to the development and review of biosimilar biological products.
Nov 2015	FDA-2012-D-0529	Organ-Specific Warnings: Internal Analgesic, Antipyretic, and Antirheumatic Drug Products for Over-the-Counter Human Use-Labeling for Products That Contain Acetaminophen	Informs manufacturers of certain nonprescription drug products that contain acetaminophen of the circumstances for which FDA does not intend to object to the inclusion of a liver warning that differs from that required under FDA regulations, provided the warning appears as described in the guidance.
Nov 2015	FDA-2013-D-0589	Human Immunodeficiency Virus-1 Infection: Developing Antiretroviral Drugs for Treatment	Assists sponsors in all phases of development of antiretroviral drugs and therapeutic biologic products for the treatment of HIV-1 infection.

Product Approvals

Below are some of CDER's product approvals that occurred in 2015. This list does not represent any degree of importance or priority ranking of products.[24]

Disease State	Approved	Product Name	Generic Name	FDA-approved use on approval date
Heart Disease	Apr 2015	Corlanor	ivabradine	To reduce hospitalization from worsening heart failure.
	Jul 2015	Entresto	sacubitril/valsartan	To treat heart failure
	Jul 2015	Praluent	alirocumab	To treat certain patients with high cholesterol
	Aug 2015	Repatha	evolocumab	To treat certain patients with high cholesterol
Multiple Myeloma	Feb 2015	Farydak	panobinostat	To treat patients with multiple myeloma
	Nov 2015	Darzalex	daratumumab	To treat patients with multiple myeloma who have received at least three prior treatments.
	Nov 2015	Empliciti	elotuzumab	To treat people with multiple myeloma who have received one to three prior medications
	Nov 2015	Ninlaro	ixazomib	To treat people with multiple myeloma who have received at least one prior therapy
Cancer	Sep 2015	Lonsurf	trifluridine and tipiracil	To treat patients with an advanced form of colorectal cancer who are no longer responding to other therapies
	Oct 2015	Yondelis	trabectedin	To treat specific soft tissue sarcomas (STS) – liposarcoma and leiomyosarcoma – that cannot be removed by surgery(unresectable) or is advanced (metastatic).
	Nov 2015	Tagrisso	osimertinib	To treat certain patients with non-small cell lung cancer
	Nov 2015	Cotellic	cobimetinib	To be used in combination with vemurafenib to treat advanced melanoma that has spread to other parts of the body or can't be removed by surgery, and that has a certain type of abnormal gene (BRAF V600E or V600K mutation)
	Dec 2015	Alecensa	alectinib	To treat ALK-positive lung cancer

24 For more information on product approvals and designations visit http://www.fda.gov/NewsEvents/ProductsApprovals/

Disease State	Approved	Product Name	Generic Name	FDA-approved use on approval date
Other Diseases	Feb 2015	Avycaz	ceftazidime-avibactam	To treat adults with complicated intra-abdominal infections (cIAI), in combination with metronidazole, and complicated urinary tract infections (cUTI), including kidney infections (pyelonephritis), who have limited or no alternative treatment options.
	Mar 2015	Cresemba	isavuconazonium sulfate	To treat adults with invasive aspergillosis and invasive mucormycosis, rare but serious infections
	May 2015	Vibrerzi	eluxadoline	To treat irritable bowel syndrome with diarrhea (IBS-D) in adult men and women.
	Jul 2015	Daklinza	daclatasvir	To treat chronic hepatitis C virus (HCV) genotype 3 infections
	Oct 2015	Veltassa	patiromer for oral suspension	To treat hyperkalemia, a serious condition in which the amount of potassium in the blood is too high.

Rules

Below is a rule recently published by CDER. Rules help address various issues. This list does not represent any degree of importance or priority ranking among the published rules.[25]

Date	#	Purpose or Benefit
Aug 2015	FDA-2015-N-0648	Designation of Official Names and Proper Names for Certain Biological Products

Enhance Oversight

Within this Goal area, the Human Drugs Program addresses the FDA Strategic Priorities on Globalization, Safety and Quality, and Smart Regulation.

The Human Drugs Program provides comprehensive regulatory coverage of the production and distribution of drug products and manages inspection programs designed to minimize consumer exposure to defective or harmful drug products. FDA evaluates the findings from inspections and examines the conditions and practices in facilities where drugs are manufactured, packed, tested, and stored. FDA also monitors the quality of finished drug products in distribution through sampling and analysis.

FDA's postmarket safety surveillance activities exist to monitor the safety of drugs that are currently available to consumers. FDA aims to identify and communicate risks associated with approved drugs. The ongoing postmarket safety activities allow FDA to discover risks associated with drug products that could not have been discovered during premarket review. The goal of safety activities is to protect patients from adverse events or improper use of drug products that could result in potentially harmful effects.

[25] For more information on FDA rules please visit http://www.fda.gov/RegulatoryInformation/RulesRegulations/default.htm.

Sentinel

The Food and Drug Administration Amendments Act (FDAAA) required FDA to establish an active surveillance system for monitoring drugs using data from electronic healthcare information. In response to the FDAAA requirement, FDA launched the Sentinel Initiative. The Sentinel Initiative provides significant public health benefits by developing new approaches and methods to monitor the safety of marketed medical products to complement existing FDA surveillance capabilities. These improvements includes access to large quantities of data that enhance FDA's ability to detect and understand safety signals to better inform patients and healthcare providers on the safe use of regulated products.

In FY 2015, the Human Drugs Program expanded surveillance to 182 million patients, which an increase of 4 million patients from FY 2014. In February 2015, FDA held the seventh annual "Sentinel Initiative Public Workshop" to bring together stakeholders who are engaged and interested in the work of the Sentinel Initiative. This meeting, among other things, engaged stakeholders to discuss current and emerging Sentinel projects. To date, the Sentinel Initiative has contributed to multiple safety communications and labeling changes to better inform patients and providers about safe use of drugs and vaccines.

Drug Quality and Security Act

In November 2013, President Obama signed into law the Drug Quality and Security Act (DQSA), Public Law 113-54, which provides FDA with additional responsibilities to oversee compounding activities. During fiscal year 2014, FDA:

- continued to conduct inspections of compounding facilities, including outsourcing facilities
- issued numerous warning letters
- initiated several enforcement actions
- continued to develop the framework to implement the new law.

As of January 1, 2016, 53 firms were registered as outsourcing facilities.

Since the law was passed in November 2013, FDA issued numerous policy documents to implement both section 503A of the Federal Food, Drug, and Cosmetic Act, as amended by the DQSA to remove uncertainty regarding its validity, as well as the new section 503B. Since enactment of the DQSA, and as of January 5, 2016, FDA has issued: 12 draft guidance documents (5 of which were finalized), a proposed rule, and a draft memorandum of understanding that FDA would enter into with individual states. For example, FDA issued draft and final guidances concerning pharmacy compounding of human drug products under section 503A, draft and final guidances concerning registration of human drug compounding outsourcing facilities under section 503B, a draft guidance on current good manufacturing practice requirements for outsourcing facilities, and draft guidances concerning repackaging of certain human drug products by pharmacies and outsourcing facilities and mixing, diluting, and repackaging of biologics outside the scope of a biologics license application.

FDA continues to work on numerous additional rules and guidances. In addition, FDA established a Pharmacy Compounding Advisory Committee which will provide advice on scientific, technical, and medical issues concerning drug compounding under sections 503A and 503B, and held three meetings of the Committee.

Title II of the DQSA, the Drug Supply Chain Security Act, outlines critical steps to build an electronic, interoperable system to identify and trace certain prescription drugs as they are distributed in the United States. By 2023, the system will facilitate the exchange of information at the individual package level about where a drug has been in the supply chain. FDA has published several draft guidances to support implementation of the DSCSA and is continuing to implement the law and further enhance the safety of the drug supply chain.

Guidances

Below are guidances issued by FDA in 2015. These guidances help address various issues. This list does not represent any degree of importance or priority ranking among the published guidances.[26]

Date	#	Title	Description
Nov 2015	FDA-2015-D-2270	DSCSA Implementation: Product Tracing Requirements for Dispensers – Compliance Policy Guidance for Industry	Announces FDA's intention with regard to enforcement of certain product tracing requirements of the Federal Food, Drug, and Cosmetic Act (FD&C Act) added by the Drug Supply Chain Security Act (DSCSA)
Jun 2015	FDA-2014-D-0248	Allowable Excess Volume and Labeled Vial Fill Size in Injectable Drug and Biological Products	Provides the pharmaceutical industry with CDER's and CBER's current thinking on allowable excess volume and labeled vial fill size in injectable drug and biological products

Rules

Below are final rules published by FDA in 2015. These rules help address various issues. This list does not represent any degree of importance or priority ranking among the published rules. [27]

Date	#	Purpose or Benefit
Jul 2015	FDA-2011-N-0898	Permanent Discontinuance of Interruption in Manufacturing of Certain Drug or Biological Products

[26] For more information on guidances please visit http://www.fda.gov/RegulatoryInformation/Guidances/.
[27] For more information on FDA rules please visit http://www.fda.gov/RegulatoryInformation/RulesRegulations/default.htm.

Promote Informed Decisions

Within this Goal area, the Human Drugs Program addresses the FDA Strategic Priority on Safety and Quality.

FDA is responsible for protecting the public health by assuring prescription drug information that healthcare professionals and consumers receive is truthful, balanced, and accurate. This is accomplished through a comprehensive surveillance, enforcement, and education program, and by fostering better communication of labeling and promotional information directed to both healthcare professionals and consumers.

Strengthen Organizational Excellence

Within this Goal area, the Human Drugs Program addresses the FDA Strategic Priority on Stewardship.

The Human Drugs Program supports FDA's objective to recruit, develop, retain, and strategically manage a world-class workforce, improving the overall operation and effectiveness of FDA. Specifically, the Center for Drug Evaluation and Research (CDER) employs a lean management approach to streamline operations in order to meet public health responsibilities and uphold CDER's public health mission with limited resources. CDER analyzes business operations and processes to maximize business modernization to accomplish as much as possible within budget constraints.

FUNDING HISTORY

Fiscal Year	Program Level	Budget Authority	User Fees
FY 2013 Actual	$1,040,607,000	$438,550,000	$602,057,000
FY 2014 Actual	$1,210,709,000	$466,303,000	$744,406,000
FY 2015 Actual	$1,369,889,000	$482,243,000	$887,646,000
FY 2016 Enacted	$1,394,827,000	$491,503,000	$903,324,000
FY 2017 President's Budget	$1,408,023,000	$491,503,000	$916,520,000

BUDGET REQUEST

The FY 2017 Budget Request is $1,048,023,000, of which $491,503,000 is budget authority and $916,520,000 is user fees. The budget authority is flat compared to the FY 2016 Enacted level and user fees increase by $13,196,000. The Center for Drug Evaluation and Research (CDER) amount in this request is $1,200,581,000. The Office of Regulatory Affairs amount is $207,442,000. The FY 2017 Budget allows the Human Drugs Program to uphold its public health mission of ensuring that new, generic, and OTC drugs are safe and effective.

Over half of CDER's budget authority is required to support its user fee programs to meet the minimum spending requirements from appropriations for PDUFA, GDUFA, and BsUFA. The remaining budget authority is necessary to support other activities that cannot be supported by user fees. The FY 2017 Budget is critical to sustain the Human Drugs Program's ability to continue base operations and conduct activities that are essential to protecting public health.

The FY 2017 Budget will enable FDA to continue to carry out rigorous science-based premarket drug reviews of new, generic, and biosimilar biological drug products. Identifying and developing new scientific methods, models, and tools to improve the quality, safety, predictability, and efficiency of new drug development is a core mission of FDA. FDA will continue to promote patient and health professional awareness of drug benefits and risks through effective communication of drug information.

FDA will continue to conduct postmarket surveillance to enable early detection of drug safety signals. FDA oversees drug promotion and marketing to help ensure that marketed drug labeling and advertising are truthful and not misleading. FDA will also continue its efforts related to opioids with abuse-deterrent properties. FDA is committed to making progress on setting and applying appropriate regulatory incentives and expectations regarding opioids with abuse-deterrent properties.

FDA will continue oversight of human drug compounding through inspections and enforcement, policy development and implementation, and state collaboration and coordination. The FY 2017 Budget will also support FDA's ability to improve the integrity of the drug supply chain. FDA will continue to establish the regulatory framework to support the implementation of the Drug Supply Chain Security Act by developing policy and programs, drafting proposed rules, drafting guidance documents and conducting public meetings.

The FY 2017 Budget will support FDA's efforts to minimize public health risks associated with counterfeit and substandard drugs. FDA is educating consumers and the health care community about the risks of, and minimizing exposure to, counterfeit and substandard drug products in addition to implementing regulatory and enforcement tools to improve the security of the drug supply chain.

In FY 2017, CDER, in coordination with the Office of Orphan Products Development will continue to support $2.5 million in additional grant funding and in associated administrative work. Additional information for the Orphan Product Grants Program can be found in the Office of Orphan Products Development request.

BUDGET AUTHORITY

Medical Product Safety and Availability: $491.5 million (+$1.0 million)

Compounding: +$1.0 million
Center: +$.56 million / Field: +$.44 million

The requested FY 2017 funding will allow FDA to improve oversight of human drug compounding through increased inspection and enforcement activities, policy development and implementation, and state collaboration and coordination. Increased efforts in these areas will help to prevent outbreaks that could result in deaths of or injuries to patients who receive compounded drugs.

FDA's budget request for compounding is critical to uphold its mission of promoting and protecting public health. Even after the 2012 fungal meningitis outbreak that killed over 60 people and injured over 750, outbreaks associated with contaminated compounded drugs continue to occur. For example, in 2013, twenty-six patients in seventeen states experienced infections after administration of contaminated preservative-free methylprednisolone acetate compounded by Main Street Family Pharmacy in Newbern, TN. FDA and CDC identified bacteria and fungi in unopened vials of the compounded product. A few months later, Specialty

Compounding of Cedar Park, TX, initiated a nationwide recall after 17 patients developed bacterial bloodstream infections after receiving an infusion of compounded calcium gluconate. Two of these patients died. FDA laboratory analysis of the calcium gluconate identified bacterial contamination.

FDA continues to identify serious insanitary conditions at compounding facilities. For example, in May 2015, FDA recommended that a compounder cease operations and recall all sterile products within expiry when, during a surveillance inspection, FDA investigators identified the use of non-sterile drinking water dispensed from a top-loaded bottled water dispenser for use in making injectable drug products; the use of non-sterile, non-pharmaceutical grade ingredients in making an injectable drug product; and dog beds, dog feces, and dog hairs within the facility, including in close proximity to the compounding room.

Since the fungal meningitis outbreak in October 2012, FDA has issued a Form FDA 483 list of inspectional observations at the close of almost all of its inspections of sterile compounders citing deviations from adequate sterile practices. Many of these pharmacies were obtaining prescriptions for at least some of the drugs they were compounding, and most were shipping drugs across state lines placing patients across the country at risk of significant harm. Continued FDA oversight of these facilities is necessary to protect the public health. Close oversight of these facilities is critical to protecting patients.

USER FEES

Current Law User Fees: +$13.2 million

The Human Drugs Program request includes an increase of $13.2 million for current law user fees, which will enhance FDA's capacity to uphold its mission of promoting and protecting the public health by ensuring safe and effective drugs are available to patients.

PERFORMANCE

The Human Drugs Program's performance measures focus on premarket and post market activities, generic drug review actions, and drug safety in order to ensure that human drugs are safe and effective and meet established quality standards, as detailed in the following table.

Measure	Year and Most Recent Result / Target for Recent Result (Summary of Result)	FY 2016 Target	FY 2017 Target	FY 2017 +/- FY 2016
223210: Review and act on 90 percent of standard NME NDA and original BLA submissions within 10 months of the 60 day filing date. *(Output)*	FY 2014: 95% Target: 90% (Target Exceeded)	90%	90%	maintain
223211: Review and act on 90 percent of priority NME NDA and original BLA submissions within 6 months of the 60 day filing date. *(Output)*	FY 2014: 96% Target: 90% (Target Exceeded)	90%	90%	maintain

Measure	Year and Most Recent Result / Target for Recent Result (Summary of Result)	FY 2016 Target	FY 2017 Target	FY 2017 +/- FY 2016
223212: Review and act on 90 percent of standard non-NME original NDA submissions within 10 months of receipt. *(Output)*	FY 2014: 97% Target: 90% (Target Exceeded)	90%	90%	maintain
223213: Review and act on 90 percent of priority non-NME original NDA submissions within 6 months of receipt. *(Output)*	FY 2014: 80% Target: 90% (Target Not Met)	90%	90%	maintain
223215: Review and act on original Abbreviated New Drug Application (ANDA) submissions within the established time frame. *(Output)*	N/A New Goal	75% within 15 months	90% within 10 months	+15%
224201: Number of foreign and domestic high-risk human drug inspections. *(Output)*	FY 2015: 835 Target: 750 (Target Exceeded)	750	750	maintain
292202: Number of people for whom FDA is able to evaluate product safety through Mini-Sentinel/Sentinel system. *(Outcome)*	FY 2015: 182 million Target: 180 million (Target Exceeded)	185 million	190 million	+5 million

The following selected items highlight notable results and trends detailed in the performance table.

Review Goals

The New Drug Review performance measures focus on ensuring that the public has access to safe and effective new treatments as quickly as possible. The goal of the PDUFA V program is to increase the efficiency and effectiveness of the first review cycle and decrease the number of review cycles necessary for approval. Although the Agency met three out of the four PDUFA performance goals, the Agency fell slightly short on the measure to review and act on 90 percent of priority non-NME original NDA submissions within six months of receipt. A total of ten applications were submitted, but two applications were reviewed and acted on after the six month goal date, resulting in missing the target for that measure. The Agency will continually work to meet or exceed the review performance targets moving forward.

The Generic Drug Review performance measure focuses on process enhancements resulting from the GDUFA program. The goal of the GDUFA program is to enhance efficiency in the generic drug review process, promote transparency between FDA and generic drug sponsors, and enhance access to high-quality, lower cost generic drugs. This investment in the Generic Drug Review program is reflected in the performance target which increases from 75% of Abbreviated

New Drug Application (ANDA) submissions reviewed in 15 months in FY 2016 to 90% reviewed in 10 months in FY 2017.

Sentinel

The Sentinel program provides essential public health benefits by enabling FDA to quickly assess the safety of FDA-approved medical products in near real time. The Sentinel program evaluates drug safety issues that may require regulatory action. In FY 2015, FDA expanded surveillance to 182 million patients, which is an increase of 4 million patients from FY 2014. FDA is in the process of transitioning from the Mini-Sentinel pilot to a sustained active surveillance system, the Sentinel System, which will ensure FDA continues to have the tools necessary to continue to conduct active safety surveillance work.

PROGRAM ACTIVITY DATA

Human Drugs Program Activity Data (PAD)

CDER Workload and Outputs	FY 2015 Actual	FY 2016 Estimate	FY 2017 Estimate
New Drug Review			
Workload – Submissions/Filings/Requests			
New Drug Applications/Biologic Licensing Applications (NDA/BLA)	140	140	140
Efficacy Supplements	160	160	160
Manufacturing Supplements	1,789	1,789	1,789
Commercial INDs (Drugs and Biologics) with Activity	6,903	6,903	6,903
Sponsor Requests: IND-Phase Formal Meetings	2,426	2,426	2,426
Sponsor Requests: Review of Special Study Protocols	224	224	224
Submissions of Promotional Materials	93,084	95,000	98,000
Outputs – Reviews/Approvals			
Reviews: Priority NDA/BLA	36	36	36
Reviews: Standard NDA/BLA	111	111	111
Approvals: Priority NDA/BLA	32	32	32
Approvals: Standard NDA/BLA	75	75	75
Mean time from Receipt to Approval: Priority NDA/BLAs (in months)	10	10	10
Mean time from Receipt to Approval: Standard NDA/BLAs (in months)	21	21	21
Median time from Receipt to Approval: Priority NDA/BLAs (in months)	8	8	8
Median Time from Receipt to Approval: Standard NDA/BLAs (in months)	12	12	12
Reviews: NDA Supplementals	2,812	2,812	2,812
Reviews: Clinical Pharmacology/ Bio-Pharmaceutic	4,855	5,098	5,353
Biologic Therapeutics Review			
Workload – Submissions/Filings/Requests			
Receipts: Commercial IND/IDE (Biologics Only)	157	157	157
Receipts: IND/IDE Amendments (Biologics Only)	27,188	27,188	27,188
Outputs – Reviews/Approvals			
Reviews: Total Original License Application (PLA/ELA/BLA)	7	7	7
Approvals: PLA/BLA	7	7	7
Reviews: License Supplement (PLA/ELA/BLA)	331	331	331
Generic Drug Review			
Workload – Submissions/Filings/Requests			
Receipts: Abbreviated New Drug Applications (ANDA)	539	750	750
Outputs – Reviews/Approvals			
Actions – ANDA	1,958	2,200	2,200
Approval Actions - ANDA (both Tentative and Full Approvals)	612	650	650
Median Review Time from ANDA Receipt to Approval (months)	42	36	36
Actions - ANDA Supplementals (Labeling and Manufacturing)	7,246	6,600	6,600
Over-the-Counter Drug Review			
OTC Monographs Under Development*	25	25	25
OTC Monographs Published*	9	5	6
*Category includes Proposed Rules, Final Rules, and Proposed and Final Orders under the Sunscreen Innovation Act			

CDER Workload and Outputs	FY 2015 Actual	FY 2016 Estimate	FY 2017 Estimate
Best Pharmaceuticals for Children Act			
Labels Approved with New Pediatric Information	20	14	14
New Written Requests Issued	19	16	16
Pediatric Exclusivity Determinations made	12	8	8
Post Exclusivity Safety Report	9	9	9
Patient Safety			
Workload – Submissions/Filings/Requests			
Submissions: Adverse Event Reports	1,616,545	1,982,995	2,432,342
Electronic Submissions: % of Total Adverse Drug Reaction Reports	95%	95%	95%
Electronic Submissions: % of Serious/Unexpected Adverse Drug Reaction Reports	94%	94%	94%
Submissions: Drug Quality Reports	12,976	13,500	14,000
Outputs – Reviews/Approvals			
Safety reviews completed by Office of Surveillance & Epidemiology	4,847	5,332	5,865
Number of drugs with Risk Communications	413	455	470
Administrative/Management Support			
Workload			
Number of Advisory Committee Meetings	29	40	40
Number of FOI Requests	3,131	3,000	3,000
Number of FOI Requests Processed	3,130	3,050	3,050
Number of Citizen Petitions Submitted (excluding suitability petitions and OTC monograph-related petitions)	75	90	90
Number of Citizen Petitions Pending on Last Day of Fiscal year (excluding suitability petitions and OTC monograph-related petitions)	176	174	174
Number of Citizen Petitions Completed [1] (excluding suitability petitions and OTC monograph-related petitions)	78	93	93

[1] Citizen Petitions completed may include petitions filed in prior years.

Field Human Drugs Program Activity Data (PAD)

Field Human Drugs Program Workload and Outputs	FY 2015 Actuals	FY 2016 Estimate	FY 2017 Estimate
FDA WORK			
DOMESTIC INSPECTIONS			
UNIQUE COUNT OF FDA DOMESTIC HUMAN DRUG ESTABLISHMENT INSPECTIONS	***1,775***	***1,856***	***1,856***
Pre-Approval Inspections (NDA)	112	171	171
Pre-Approval Inspections (ANDA)	122	216	216
Bioresearch Monitoring Program Inspections	573	563	563
Drug Processing (GMP) Program Inspections	713	591	591
Compressed Medical Gas Manufacturers Inspections	201	295	295
Adverse Drug Events Project Inspections	92	120	120
OTC Monograph Project and Health Fraud Project Inspections	42	79	79
Compounding Inspections[1]	115	130	130
Domestic Laboratory Samples Analyzed	1,450	1,450	1,450
FOREIGN INSPECTIONS			
UNIQUE COUNT OF FDA FOREIGN HUMAN DRUG ESTABLISHMENT INSPECTIONS [2]	***1072***	***999***	***999***
Foreign Pre-Approval Inspections (NDA) incl PEPFAR	107	98	98
Foreign Pre-Approval Inspections (ANDA) incl PEPFAR	194	83	83
Foreign Bioresearch Monitoring Program Inspections incl PEPFAR	221	255	255
Foreign Drug Processing (GMP) Program Inspections	814	843	843
Foreign Adverse Drug Events Project Inspections	10	15	15
TOTAL UNIQUE COUNT OF FDA HUMAN DRUG ESTABLISHMENT INSPECTIONS	***2,847***	***2,855***	***2,855***
IMPORTS			
Import Field Exams/Tests	8,437	7,200	7,200
Import Laboratory Samples Analyzed	586	490	490
Import Physical Exam Subtotal	**9,023**	**7,690**	**7,690**
Import Line Decisions	688,208	734,654	784,234
Percent of Import Lines Physically Examined	1.31%	1.05%	0.98%
STATE WORK			
UNIQUE COUNT OF STATE PARTNERSHIP HUMAN DRUG ESTABLISHMENT INSPECTIONS [3]	***0***	***0***	***0***
State Partnership Inspections: Compressed Medical Gas Manufacturers Inspections	0	0	0
State Partnership Inspections: GMP Inspections	0	0	0
GRAND TOTAL HUMAN DRUG ESTABLISHMENT INSPECTIONS	***2,847***	***2,855***	***2,855***

[1] The number of compounding inspections includes inspections of compounding pharmacies and outsourcing facilities under sections 503A and 503B respectively.

[2] The FY 2015 actual unique count of foreign inspections includes 69 OIP inspections (24 for China, 36 for India, & 9 for Latin America).

[3] The State inspections that are funded by the FDA are now being obligated via formal contract funding vehicles.

OFFICE OF ORPHAN PRODUCTS DEVELOPMENT[28]

(Dollars in Thousands)	FY 2015 Final	FY 2015 Actuals	FY 2016 Enacted	FY 2017 President's Budget	FY 2017 +/- FY 2016
Office of Orphan Products Development (BA Only).....	23,599	23,599	26,099	26,099	---
FTE…….....	27	27	27	27	---

Authorizing Legislation: Federal Food, Drug and Cosmetic Act (21 U.S.C. 321-399); PHS Act (42 U.S.C. 241) Section 301; Safe Medical Device Act of 1990 (as amended) (21 U.S.C. 351-353, 360, 360c-360j, 371-375, 379, 379e, 381); Pediatric Medical Devices Safety and Improvement Act of 2007, Section 305; Food and Drug Administration Safety and Innovation Act of 2013, Sections, 510, 620 and 908.

Allocation Method: Direct Federal/Extramural Grants

PROGRAM DESCRIPTION AND ACCOMPLISHMENTS

The public health programs of the Office of Orphan Products Development (OOPD) have promoted and advanced the development of innovative products – drugs, biologics, medical devices, and medical foods – that demonstrate promise for the prevention, diagnosis, and/or treatment of rare diseases or conditions. There are an estimated 7,000 rare diseases, with a public health impact that affects more than 25 million Americans and many millions more of family members in the United States. Between 85 and 90 percent of these cases are serious or life-threatening.

Improve and Safeguard Access

OOPD administers major provisions of the 1983 Orphan Drug Act (ODA), relevant sections of the 1990 Safe Medical Devices Act, and other statutes, where Congress sought to provide incentives to promote the development of products for the treatment of rare diseases or conditions. OOPD's program activities directly support the Health and Human Services' strategic goal to advance scientific knowledge and innovation.[29] Further, OOPD activities support FDA's strategic goal to improve access to FDA regulated products that benefit health by enhancing the process of developing promising new products into safe, effective, and accessible treatments for rare disease patients. OOPD programs facilitate product development through collaboration with private, public, and academic entities.

Orphan Product Grants Activity

The Orphan Drug Act created the Orphan Product Grants Program, which is administered by OOPD, to stimulate the development of promising products for rare diseases and conditions. Orphan product grants are a proven method of fostering and encouraging the development of new safe and effective medical products for rare diseases and conditions. These grants support new and continuing extramural research projects that test the safety and efficacy of promising new drugs, biologics, devices, and medical foods through human clinical trials in very vulnerable populations often with life-threatening conditions.

Over 700 clinical trials have been funded by the Orphan Products Grants Program to date. This OOPD Grants Program has supported the marketing approval of more than 55 orphan products

[28] The Office of Orphan Products Development is shown for illustrative purposes and is not contained as a separate line item in the All Purpose Tables.
[29] http://www.hhs.gov/about/strategic-plan/strategic-goal-2/index.html

for serious or life threatening orphan indications. This program has funded approximately 10 percent of all orphan product approvals. In FY 2015, OOPD funded 18 new grant awards – out of 92 grant applications – and provided funding or continued support for approximately 67 other ongoing clinical study projects.

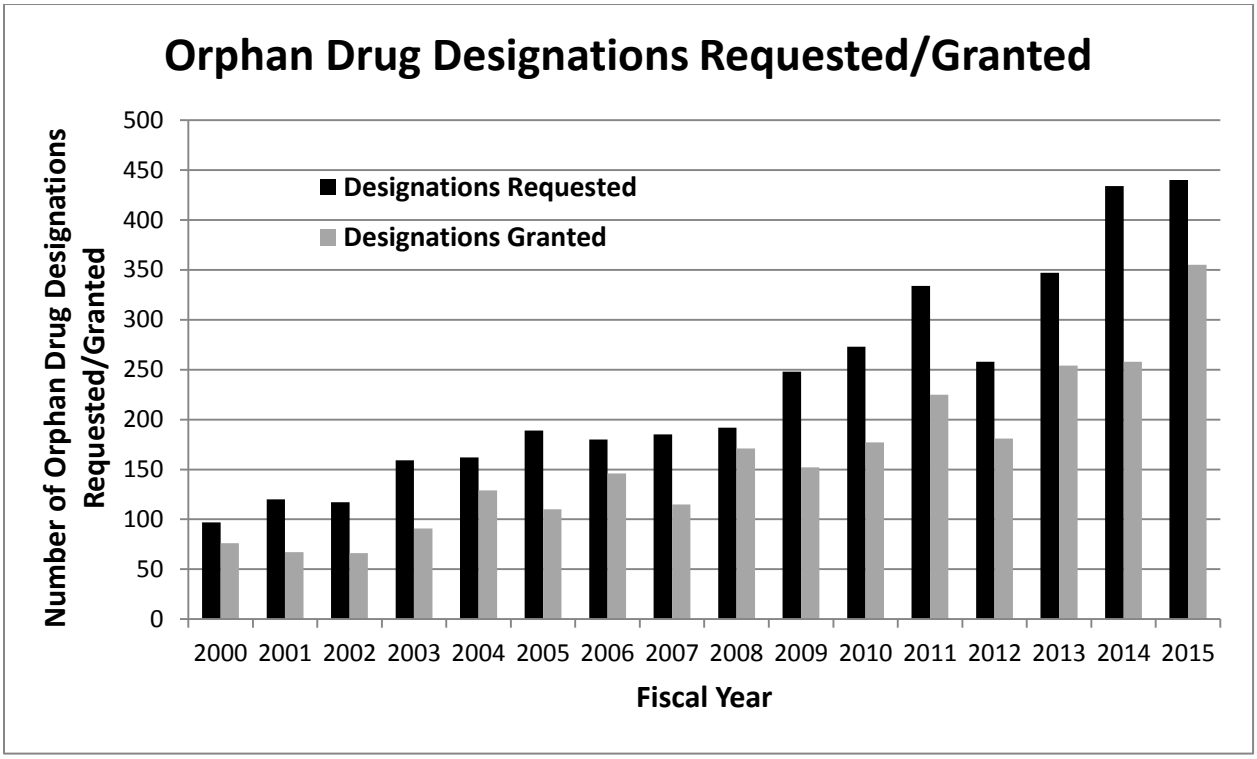
Grants are a modest investment to better ensure that product development occurs in a timely manner. However, FDA grant funds are covering less and less of the total cost for conducting clinical trials, which continue to increase far faster than the rate of medical inflation. Increases in the costs of clinical trials have reduced the capacity of the program to provide the needed monetary support to researchers actively conducting clinical trials that increase the number of new, safe and effective diagnostic and therapeutic options for patients with rare diseases.

Orphan Drug Designation Activity

The Orphan Drug Act also created the orphan drug designation program which provides financial incentives to sponsors for developing drugs and biologics for rare diseases and conditions, which is generally defined as one affecting fewer than 200,000 persons in the United States. OOPD evaluates applications from sponsors who are developing drugs to treat rare diseases to determine eligibility for orphan drug designation. Sponsors whose drugs are designated as orphan are eligible for significant tax credits for clinical trial costs, user fee waiver of marketing applications, and upon approval, consideration for seven years of marketing exclusivity.

Of the 3,500 orphan drug designations OOPD issued since 1983, over 500 have resulted in marketing approval, the vast majority with orphan exclusivity. In contrast, the decade prior to 1983 saw fewer than ten such products developed by industry make it into the market. During FY 2015, OOPD received a record 440 new applications for orphan drug designation. These included potential treatments for many kinds of rare cancers, sickle cell disease, and Ebola. OOPD designated a record 355 orphan drugs in FY 2015. FDA approved 40 orphan designated drugs for marketing in FY 2015.

The number of requests for orphan designation has quadrupled since FY 2000. Not only are the requests rapidly increasing, but the complexity of the science associated with these orphan drugs is increasing due, in part, to advances in pharmacogenomics and precision medicine. In FY 2015, approximately 33 percent of all the new molecular entities that FDA approved were orphan designated drugs and biologics.



Product Designations

Below are examples of Orphan Product designations that occurred in 2015.[30]

Date	Product	Purpose or Benefit
June 2015	Recombinant virus serotype (rh74) expressing the human GALGT2 gene	A gene therapy for the treatment of Duchenne muscular dystrophy – a life-threatening, progressive rare disease with no curative therapy
March 2015	Adeno-associated viral vector type 2 expressing human recombinant retinal pigment epithelial 65KDa protein gene	A gene therapy to treat retinitis pigmentosa, a rare genetic defect causing blindness
March 2015	Sevuparin	To treat sickle cell disease – a rare, life-threatening, inherited blood disorder, with no approved treatment for children
March 2015	Sonidegib	To treat the rare, life-threatening pediatric brain cancer, medulloblastoma

30 For more information on product approvals and designations visit http://www.fda.gov/NewsEvents/ProductsApprovals/

Rare Pediatric Disease Priority Review Voucher Designation
Food and Drug Administration Safety and Innovation Act (FDASIA) added Section 529 to the FD&C Act to encourage development of new drug and biological products ("drugs") for the prevention and treatment of qualifying rare pediatric diseases. This legislation created the Rare Pediatric Disease Priority Review Voucher (PRV) program wherein the sponsor of an approved drug to prevent or treat a rare pediatric disease may receive a voucher for a priority review of a subsequent drug.

Sponsors who are interested in receiving a rare pediatric disease priority review voucher may first request a "rare pediatric disease" designation through OOPD. While such designation is not required to receive a voucher, requesting designation in advance may expedite a sponsor's future request for a priority review voucher. In FY 2015, OOPD received 31 rare pediatric disease designation requests plus 2 consults from submitted marketing applications needing rare pediatric disease determinations. Of these, OOPD determined that 21 met the definition of a "rare pediatric disease." As of December 2015, six rare pediatric disease priority review vouchers were issued.

The program is due to sunset on September 30, 2016.

Humanitarian Use Device (HUD) Designation Activity
The HUD program, created from provisions of the Safe Medical Devices Act, encourages the development of devices for rare diseases and is administered by OOPD.

OOPD reviews applications from sponsors requesting HUD designation. A device that has received HUD designation is eligible for Humanitarian Device Exemption (HDE) approval if, among other criteria, the device will not expose patients to an unreasonable or significant risk of illness or injury and the probable benefit to health from use of the device outweighs the risk of injury or illness from its use, taking into account the probable risks and benefits of available devices or alternative forms of treatment. FDA approval of an HDE application authorizes the applicant to market the device. This marketing approval is subject to certain profit and use restrictions set forth in Section 520(m) of the FD&C Act. Since 1990, 66 HUD devices have been approved for marketing through the HDE pathway.

Except in certain circumstances, a HUD approved under an HDE cannot be sold for an amount that exceeds the costs of research and development, fabrication, and distribution of the device (for profit). Under Section 520(m)(6)(A)(i) of the FD&C Act, as amended by FDASIA, a HUD is eligible to be sold for profit after receiving HDE approval if the device meets certain criteria. Currently, eleven manufacturers have received approval to market their devices for profit and other sponsors have submitted requests to qualify for the exemption from profit prohibition.

In FY 2015, OOPD received 21 new HUD applications and designated six devices. An additional four devices were designated based on HUD applications originally submitted in prior years for a total of 10 HUD devices designated in FY 2015. In FY 2015, four devices received an HDE approval from CDRH and of these, one manufacturer was authorized to market their device for profit. Also, in FY2015, two manufacturers who previously had HDE approval were authorized to market their devices for profit.

Pediatric Device Consortia Grants Activity
There is a significant public health need for medical devices designed specifically for children. This need is due in part to the lack of commercial incentives and market forces to drive pediatric

medical device development, as well as the challenges of pediatric device development including differences in size, growth, development, and body chemistry that impact pediatric device requirements. Section 305 of the Pediatric Medical Device Safety and Improvement Act of 2007 (part of the 2007 FDAAA legislation) mandates demonstration grants for improving pediatric device availability through pediatric device consortia.

The FDA Pediatric Device Consortia Grant Program, administered in OOPD, supports nonprofit consortia that promote the development of pediatric medical devices. In FY 2015, the consortia funded in this program are based out of Ann Arbor, MI; Atlanta, GA; Boston, MA; Washington, DC; Lebanon, NH; Los Angeles, CA; Philadelphia, PA; and San Francisco, CA.

Since the program's inception in 2009, a total of $21.4 million has been awarded to the consortia. Collectively, the consortia have supported the development of more than 570 potential pediatric devices, many of which are in the early stages of development. Eight new devices are now available for use in pediatric patients as a result of advisory assistance received from the consortia, including the "Buzzy" device for relief of pain associated with needlesticks; the Rhinoguard to assist in nasotracheal intubation; and an external compressor brace for pectus carinitum. The consortia collectively have also raised more than $65 million of additional non-FDA funds to support pediatric device development research.

Promote Informed Decisions

OOPD participates in significant communication and outreach activities by:

- providing information on incentives available to develop products for rare diseases to external stakeholders including industry, the patient community, advocacy groups, and international regulatory agencies
- speaking at meetings and conferences on the FDA designation and approval processes, the OOPD grant programs, and the science of developing therapeutic products for rare diseases and conditions
- assisting patients and advocacy groups on issues of concern related to rare diseases and orphan products, such as pediatric device needs and orphan drug shortages
- providing web-based rare disease and orphan product resources and information to various stakeholders such as industry, the patient community, advocacy groups, and international regulatory agencies

In FY 2015**,** OOPD participated in 68 individual industry outreach meetings. In addition, OOPD received more than 38 invitations to speak and participate at orphan product stakeholder meetings and conferences to discuss different rare disease issues. OOPD made presentations and participated in 26 of these meetings both nationally and internationally, often to explain how orphan drugs and humanitarian devices could be developed with ODA incentives and HDE provisions, as well as FDASIA requirements for rare diseases.

At these meetings, the missions of OOPD and FDA were explained, and questions and concerns from stakeholders were addressed. Examples of public health related OOPD outreach activities in FY 2015 include conducting training courses for researchers and reviewers, and presentations to national and international rare disease patient groups. In FY 2016 through FY 2017, OOPD will continue the outreach efforts to enhance all stages of the development and approval process for products to treat rare disease patients.

FUNDING HISTORY

Fiscal Year	Program Level	Budget Authority	User Fees
FY 2013 Actual	$23,140,000	$23,140,000	$0
FY 2014 Actual	$24,745,000	$24,745,000	$0
FY 2015 Actual	$23,599,000	$23,599,000	$0
FY 2016 Enacted	$26,099,000	$26,099,000	$0
FY 2017 President's Budget	$26,099,000	$26,099,000	$0

BUDGET REQUEST

The FY 2017 Budget Request is $26,099,000 in budget authority. With this funding level, OOPD will fund a total of 15 to 20 new grant awards and provide funding or continued support for approximately 75 other ongoing clinical study projects.

In addition, in FY 2017, OOPD plans to initiate a new, much needed, Grants Program to fund targeted rare disease natural history studies that provide the critical foundation for a drug or device's clinical development program. These natural history studies will assist in drug development and identification of treatment options in many ways like formulating sensitive clinical outcome measures, identifying appropriate subpopulations or developing biomarkers. Despite their importance, funding to conduct such studies is sorely lacking. In FY 2017, OOPD plans to award 2-4 grants for targeted natural history studies to expedite development of products for these vulnerable populations.

PERFORMANCE

Measure	Year and Most Recent Result / Target for Recent Result (Summary of Result)	FY 2016 Target	FY 2017 Target	FY 2017 +/- FY 2016
293207: Percentage of reviews of first-time and amended orphan drug designation applications completed in 90 days or less. *(Output)*	FY 2015: 90% (Historical Actual)	75%	75%	Maintain
293208: Percentage of Humanitarian Use Device designation reviews completed in 45 days or less. *(Output)*	FY 2015: 100% (Historical Actual)	95%	95%	Maintain

PROGRAM ACTIVITY DATA

Office of Orphan Products Development				
Program Workload and Outputs	**FY 2014 Actuals**	**FY 2015 Actuals**	**FY 2016 Estimate**	**FY 2017 Estimate**
Grant Programs				
Total Orphan Product Grant (New and Continuations)	80	85	90	90
Total Pediatric Consortia Grants (New and Continuations)	8	8	8	8
Orphan Drug Designation Requests/Designations Granted/Orphan Drug Approvals				
New Orphan Drug Designation Requests	434	440	440	440
Drug Designations Granted	285	335	335	335
FDA Orphan Drug Marketing Approvals	45	40	40	40
HUD Requests and Designations				
New HUD Designation Requests	17	21	25	25
HUD Designations	12	10	14	14
Rare Pediatric Disease Priority Review Voucher Designation/Consultation Requests	**15**	**31**	**40**	**0**

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BIOLOGICS

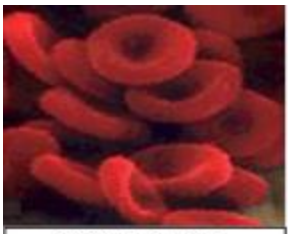
(Dollars in Thousands)	FY 2015 Final	FY 2015 Actuals	FY 2016 Enacted	FY 2017 President's Budget	FY 2017 +/- FY 2016
Biologics	**344,267**	**326,290**	**354,901**	**359,989**	**5,088**
Budget Authority	***211,382***	***211,362***	***215,443***	***215,443***	---
User Fees	***132,885***	***114,928***	***139,458***	***144,546***	***5,088***
Center	298,979	283,230	311,209	316,212	5,003
Budget Authority	171,096	171,079	174,052	174,052	---
User Fees	127,883	112,151	137,157	142,160	5,003
Prescription Drug (PDUFA)	*115,493*	*100,500*	*123,801*	*128,341*	4,540
Medical Device (MDUFA)	*10,549*	*11,402*	*11,475*	*11,897*	422
Generic Drug (GDUFA)	*1,052*	*240*	*1,072*	*1,092*	20
Biosimilars (BsUFA)	*789*	*9*	*809*	*830*	21
Field	45,288	43,060	43,692	43,777	85
Budget Authority	40,286	40,283	41,391	41,391	---
User Fees	5,002	2,777	2,301	2,386	85
Prescription Drug (PDUFA)	*4,810*	*2,584*	*2,084*	*2,161*	77
Medical Device (MDUFA)	*192*	*193*	*217*	*225*	8
FTE	**1,321**	**1,304**	**1,342**	**1,345**	**3**

Authorizing Legislation: Public Health Service Act; Federal Food, Drug, and Cosmetic Act; Medical Device Amendments of 1976; Clinical Laboratory Improvement Amendments of 1988 (42 U.S.C. 201); Safe Medical Devices Act of 1990; Medical Device Amendments of 1992; Food and Drug Administration Modernization Act of 1997; Medical Device User Fee and Modernization Act of 2002; Public Health Security and Bioterrorism Preparedness Response Act of 2002; Project Bioshield Act of 2004; Medical Device User Fee Stabilization Act of 2005; Food and Drug Administration Amendments Act of 2007 (FDAAA); Patient Protection and Affordable Care Act of 2010; Food and Drug Administration Safety and Innovation Act of 2012 (FDASIA); Drug Quality and Security Act of 2013; Pandemic and All-Hazards Preparedness Reauthorization Act of 2013.

Allocation Methods: Direct Federal/Intramural

PROGRAM DESCRIPTION AND ACCOMPLISHMENTS

The Biologics Control Act, passed in 1902, established the Biologics Program in the Department of Treasury's Hygienic Laboratory, which later became part of the National Institute of Health (NIH) in 1930. In 1972, the Biologics Program was transferred from NIH to FDA and became the Bureau of Biologics. In 1988, the Bureau became the Center for Biologics Evaluation and Research (CBER) which, with the Office of Regulatory Affairs' (ORA) field program, comprises the FDA Biologics Program.


Red Blood Cells

FDA's Biologics Program is responsible for protecting and enhancing public health by ensuring the safety, purity, potency and effectiveness of biological products − for the prevention, diagnosis, and treatment of human diseases, conditions, or injuries − including:

- vaccines (preventive and therapeutic)
- allergenics
- blood and blood products
- human tissues and cellular products

- gene therapies
- devices – specific subsets
- xenotransplantation[31] products.

FDA regulates complex biological products that involve novel and cutting-edge technologies and evolving science. FDA is responsible for the evaluation of the safety, purity potency and effectiveness of biological products and determines whether a product can be approved based on an evaluation of scientific data. Some cells and tissues for transplantation are regulated with a focus on prevention of the contamination of tissues and the spread of communicable disease.

FDA works with other Federal agencies, foreign governments and their national regulatory authorities, and international organizations such as the World Health Organization (WHO). FDA also protects the public against the threat of:

- emerging infectious diseases
- neglected tropical diseases
- potential bioterrorism agents.

To contribute to the improvement of public health in the years to come, CBER implemented a strategic plan which is a framework for guidance, decision-making, and future planning. This plan aligns with FDA's Strategic Priorities and the Department of Health and Human Services' (HHS) strategic plan by focusing on:

- protecting and improving public health
- facilitating the development of new technologies and the approval of products
- strengthening FDA as a preeminent regulatory organization for biological products

The work performed by the Biologics program supports FDA's priorities and the accomplishments represent significant efforts in support of the mission to protect and improve health both in the United States and globally. During the past year, the Biologics Program contributed to the improvement of public health with the following accomplishments:

- provided scientific and regulatory advice to sponsors and stakeholders on development of biological products to address the Ebola outbreak in West Africa
- evaluated investigational new drug (IND) applications related to Ebola
- utilized accelerated approval pathway to approve TRUMENBA and BEXSERO – vaccines designated as breakthrough therapies for the prevention of serogroup B meningococcal disease
- issued a Notice of Intent to Revoke (NOIR) license letter to a manufacturer for repeated violations of current Good Manufacturing Practice (cGMP).

The following selected accomplishments demonstrate the Biologics Program's delivery of its regulatory and public health responsibilities within the context of current priorities.[32]

[31] Xenotransplantation is any procedure that involves the transplantation, implantation or infusion into a human recipient of either (a) live cells, tissues, or organs from a nonhuman animal source, or (b) human body fluids, cells, tissues or organs that have had ex vivo contact with live nonhuman animal cells, tissues or organs

[32] Please visit FDA.gov for additional program information and detailed news items.

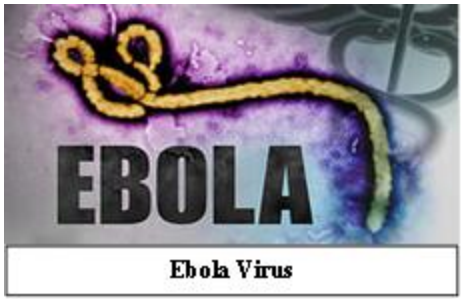
Improve and Safeguard Access

Within this Goal area, the Biologics Program addresses the following FDA Strategic Priorities: Safety and Quality, Regulatory Science, Globalization and Smart Regulation. FDA's Biologics Program is responsible for regulating a diverse range of products, from new and innovative vaccines and allergenics to novel cellular and gene therapies. To improve access to biological products, FDA uses all available tools, including regulatory science, to effectively evaluate products and improve predictability, consistency, transparency, and efficiency of the review process. These activities include:

- increasing preparedness to address public health threats
- supporting expedited regulatory pathways
- approving new biological products to treat and prevent diseases
- improving global public health through international collaboration
- issuing guidances to improve and safeguard access to biological products.

Increasing Preparedness to Address Public Health Threats as a Result of Bioterrorism, Pandemic and Emerging Infectious Diseases

Ebola



Ebola Virus

To help speed development and production programs for Ebola vaccines, FDA is providing scientific and regulatory advice to the regulated industry and U.S. government agencies that support medical product development, including the National Institute of Allergy and Infectious Diseases (NIAID), the Centers for Disease Control and Prevention (CDC), and the Biomedical Advanced Research and Development Authority (BARDA) within HHS and the U.S. Department of Defense (DOD). FDA's Biologics Program has expeditiously reviewed 18 IND applications for vaccines and other products intended to prevent or treat Ebola, allowing for the initiation of studies in humans. FDA has also responded to numerous requests for emergency use of investigational vaccines and Ebola convalescent plasma.

FDA is also collaborating with the World Health Organization (WHO) and international regulatory counterparts, including the European Medicines Agency and Health Canada, to exchange information about investigational products for Ebola. These efforts support regulatory collaboration to harmonize and accelerate the development of these and other biological products.

In September 2015, FDA participated in Health Canada's International Regulatory Forum (IRF). The IRF included a meeting of the African Vaccine Regulatory Forum (AVAREF) to discuss the experience of conducting joint reviews of Ebola vaccine clinical trial applications with African regulators to facilitate initiation of Ebola vaccine clinical trials in the affected countries. The discussion focused on "lessons learned" that could help guide future joint reviews within AVAREF.

On May 12, 2015, FDA's Vaccines and Related Biological Products Advisory Committee (VRBPAC) met in open session to discuss the development and licensure of Ebola vaccines.

Infectious Threats

In September 2015, FDA attended and participated in a WHO meeting in Geneva, Switzerland to discuss and plan for the international use of various smallpox vaccines in the event of an emergency.

In June 2015, FDA, together with NIH, co-sponsored a Respiratory Syncytial Virus (RSV) Vaccine Workshop. The purpose of the workshop was to explore the scientific, clinical, and regulatory challenges encountered in the development of RSV vaccines and to discuss approaches that may help overcome barriers. The workshop also reviewed the basic science and clinical data that inform the regulation of products currently under development.

On March 4, 2015, FDA's VRBPAC met in open session and made recommendations on the selection of strains to be included in the influenza virus vaccines for the 2015-2016 influenza season.

FDA is closely monitoring the Chikungunya virus (CHIKV) epidemic in the Caribbean, Puerto Rico, the US Virgin Islands, and sporadic outbreaks in Florida. FDA has taken the following steps to mitigate the risk of CHIKV infection in United States blood donors:

- collaborated with Puerto Rico's Department of Health to develop mitigation measures
- helped prevent Chikungunya virus transmission by allowing use of the investigational device – Intercept Blood System for platelets, prior to approval
- updated the Blood Products Advisory Committee on the Emergence of Chikungunya Virus Infections in the Western Hemisphere and the implications for blood transfusion safety
- promoted the development of tests for detection of CHIKV in blood donors.

Supporting Expedited Regulatory Pathways for Product Review

FDA understands advantages of expediting the availability of drugs that treat serious and life threatening diseases. Expedited regulatory pathways are especially important when a drug serves as the first available treatment for an illness or if the drug has significant benefits over existing treatments. Recently, FDA utilized fast track designation and priority review to approve the orphan drug product Coagadex, Coagulation Factor X (Human). It was approved for the on-demand treatment and control of bleeding episodes for individuals with hereditary Factor X deficiency. Until Coagadex, Coagulation Factor X's approval in October 2015, no specific coagulation factor replacement therapy was available for patients with hereditary Factor X deficiency.

FDA granted breakthrough therapy designation to both Trumenba and Bexsero, vaccines to prevent serogroup B Meningococcal disease. A breakthrough therapy drug is a drug intended alone or in combination with one or more other drugs to treat a serious or life threatening disease or condition. In addition, the preliminary clinical evidence must indicate that the drug may demonstrate substantial improvement over existing therapies on one or more clinically significant endpoints. FDA may grant the designation of breakthrough therapy, as set forth in Section 902 of FDASIA. In addition, FDA approved Trumenba and Bexsero under the accelerated approval regulatory pathway. In the case of these vaccines that means that effectiveness was based on an immune response reasonably likely to predict clinical benefit. By making use of surrogate endpoints, accelerated approval can help reduce the time it takes for needed medical products to become available to the public.

In April 2015, FDA published a final guidance for Industry and FDA staff "Approval and De Novo Medical Devices Intended for Unmet Medical Need for Life Threatening or Irreversibly Debilitating Diseases or Conditions." The guidance introduces a new, voluntary program for certain medical devices that demonstrate the potential to address unmet medical needs for life threatening or irreversibly debilitating diseases or conditions and are subject to premarket approval applications (PMAs) or de novo requests, which are premarket pathway options for reclassifying a product.

The "Expedited Access Pathway" or "EAP" program will help patients have more timely access to these medical devices by expediting their development, assessment, and review. The EAP program will also preserve the statutory standard of reasonable assurance of safety and effectiveness for premarket approval and the statutory standards for granting a de novo request consistent with the Agency's statutory mission to protect and promote public health.

Approving New Biological Products to Treat and Prevent Diseases

In addition to the aforementioned work on Ebola and approvals for the meningococcal B vaccines, the Biologics Program reviewed and approved an array of biological products to treat and prevent diseases.

Selected Product Approvals in 2015

Below are some of CBER's product approvals that occurred in the last calendar year. This list does not represent any degree of importance or priority ranking of products.[33]

Date	Product Name	Purpose or Benefit
Nov 2015	BioThrax	New indication to prevent disease following suspected exposure to the bacterium that causes anthrax. First vaccine to receive approval based on Animal Rule.
Oct 2015	ImlygicMelanoma	The first FDA-approved oncolytic virus therapy, for the treatment of melanoma lesions in the skin and lymph nodes.
Jun 2015	ADVIA Centaur HIV Ag/Ab Combo (CHIV) Assay	The CHIV assay is intended to be used as an aid in the diagnosis of HIV infection in pediatric and adult populations, including pregnant women.
Apr 2015	Raplixa (Fibrin Sealant [human])	First licensed biological product manufactured using spray drying technology and intended to help control bleeding during surgery, when standard surgical techniques are ineffective or impractical
Jan 2015	Bexsero	A vaccine to prevent invasive meningococcal disease caused by meningitis B in individuals ages 10 through 25.

Improving Global Public Health through International Collaboration, Including Research and Information Sharing

FDA has participated in various meetings with WHO to facilitate regulatory capacity building of national regulatory authorities in developing countries.

In October 2015, FDA attended the 2015 WHO Expert Committee on Biological Standardization (ECBS) meeting in Geneva, Switzerland. The purpose of the meeting was to review and discuss

[33] Complete information on Biological approvals can be found at: http://www.fda.gov/BiologicsBloodVaccines/DevelopmentApprovalProcess/BiologicalApprovalsbyYear/default.htm

the establishment, discontinuation, and replacement of WHO biological reference materials, as well as the adoption of WHO guidelines and recommendations.

On October 23, 2015, FDA served on the roundtable panel at the International Alliance for Biological Standardization (IABS) meeting in Geneva, Switzerland. The purpose of the meeting was to exchange information on surveillance research on the development of narcolepsy following vaccination with adjuvanted influenza A (H1N1) vaccines.

In July 2015, FDA attended a WHO conference of collaborating centers on in vitro Diagnostic Devices in Potters Bar, England. During the meeting, updates on infectious disease markers and WHO guidelines were discussed. FDA also provided updates on Babesia microti testing and various infectious markers including Ebola, CHIKV, Dengue, and West Nile Virus.

On May 16, 2015, FDA sponsored a meeting of the International Pharmaceutical Regulators Forum (IPRF) Gene Therapy Working Group. Members of ten international regulatory authorities participated. The group discussed regulatory requirements and approaches for evaluating the dissemination profile of gene therapy products in animals to support the safe clinical development of this product class.

On February 26, 2015, FDA held the jointly sponsored 18th US-Japan Cellular and Gene Therapy Conference to exchange ideas on cutting edge areas of biomedical research and to enhance opportunities for collaborations among scientists from Japan and the US.

Selected Guidances Published in 2015

Below are guidances issued by FDA in the last calendar year. These guidances help address various issues.[34]

Date	#	Title	Description
Dec 2015	FDA-2014-D-2175-0001FDA-2014-D-2175-0001	Recommendations for Assessment of Blood Donor Suitability, Donor Deferral and Blood Product Management in Response to Ebola Virus	Provides recommendations to blood establishments on donor and product management to ensure blood supply safety in response to potential future Ebola outbreaks.
Sep 2015	FDA-2013-D-1213	Use of Donor Screening Tests To Test Donors of Human Cells, Tissues, and Cellular and Tissue-Based Products for Infection With Treponema pallidum (Syphilis); Guidance for Industry; Availability	Provides establishments that make donor eligibility determinations for donors of HCT/P products with updated recommendations concerning donor testing for evidence of Treponema pallidum (Syphilis).
Aug 2015	FDA-2015-D-2818	Rare Diseases: Common Issues in Drug Development	Advances and facilitates the development of drugs and biologics to treat rare diseases. Also, assists sponsors in conducting more efficient and successful development programs.

[34] Complete information on CBER guidances can be found at:
http://www.fda.gov/BiologicsBloodVaccines/GuidanceComplianceRegulatoryInformation/Guidances
Complete information on CBER rules can be found at:
http://www.fda.gov/BiologicsBloodVaccines/GuidanceComplianceRegulatoryInformation/ActsRulesRegulations/default.htm

Date	#	Title	Description
Jun 2015	FDA-2013-D-0576	Considerations for the Design of Early-Phase Clinical Trials of Cellular and Gene Therapy Products; Guidance for Industry	Provides recommendations regarding clinical trials in which the primary objectives are the initial assessments of safety, tolerability, or feasibility of administration of investigation products
Apr 2015	FDA-2014-D-0363-0003	Approval and De Novo Medical Devices Intended for Unmet Medical Need for Life Threatening or Irreversibly Debilitating Diseases or Conditions	A voluntary program for medical devices that address unmet medical needs for life threatening or debilitating diseases or conditions, subject to premarket approval (PMA) applications or de novo classifications.

Enhance Oversight

Within this Goal area, the Biologics Program addresses the following FDA Strategic Priorities: Safety and Quality, Regulatory Science, Globalization and Smart Regulation. FDA's oversight of production, manufacturing, and the global supply chain, and surveillance of postmarket product use plays a critical role in assuring the safety of FDA-regulated products.

In addition, regulatory oversight has enabled FDA to:

- develop standards
- reduce risks in the manufacturing, production, and distribution of FDA-regulated products
- strengthen the detection and surveillance of potential problems
- improve the response to identified and emerging problems with FDA-regulated products.

Activities related to enhanced oversight include:

- providing outreach to the blood industry
- enhancing the surveillance of biological products
- issuing guidances to enhance oversight of biological products.

In addition, FDA's field work also plays an integral role in assuring the safety of FDA-regulated products. The field staff provides surveillance through inspections at domestic and foreign manufacturing facilities and clinical study sites, including blood and tissue establishments, vaccine and allergenic facilities, device manufacturers, gene and cell therapy facilities, and plasma fractionators. FDA performs inspections to oversee clinical investigators and institutional review boards to ensure that the rights of human subjects participating in clinical trials are protected.

Postmarket inspections are conducted after products are approved. These inspections are performed to assure that products are manufactured in compliance with cGMP and other applicable FDA regulations. These efforts help to ensure that the biologics industry continuously reviews the quality standards of its manufacturing operations to maintain the safety and effectiveness of biological products on the U.S. market.

For example, in FY 2015, FDA issued a Notice of Intent to Revoke (NOIR) license letter to a sterile drug and allergenic extract manufacturer. Prior to issuance of the notice, FDA

investigators repeatedly documented significant violations of cGMP. The firm was cited for failing to establish and follow written procedures designed to prevent microbiological contamination. In addition, the firm was cited for failing to investigate unexplained discrepancies of a batch to meet its specifications and for failing to adequately maintain a system for monitoring environmental conditions. The firm's corrective actions will be assessed upon re-inspection and further action will be taken if continued significant violations are documented.

Providing Outreach to the Blood Industry

The blood collection industry is experiencing significant reductions in collections of Whole Blood and Red Blood Cells due to decreased demand for red blood cells for transfusion. FDA has participated in meetings of the HHS Advisory Committee on Blood and Tissue Safety and Availability (ACBTSA) to discuss the sustainability of the blood collection industry. In addition, FDA has met with trade organizations to discuss their concerns. As part of its ongoing blood safety efforts, FDA is implementing a transfusion-transmitted infections monitoring system (TTIMS) through contracts with blood organizations. TTIMS will evaluate the safety of more than 50 percent of the US blood supply by monitoring infectious disease agents including HIV, Hepatitis B, and Hepatitis C viruses in blood donations.

On September 17-18, 2015, FDA held a public workshop "New Methods to Predict the Immunogenicity of Therapeutic Coagulation Proteins" in partnership with the National Heart, Lung and Blood Institute, National Institutes of Health (NIH), the National Hemophilia Foundation, and the Plasma Protein Therapeutics Association. The purpose of the workshop was to discuss recent scientific progress in identifying the genetic determinants for an unwanted immune response to therapeutic coagulation proteins (immunogenicity), and to identify and discuss potential new methods to predict such immunogenicity.

On July 10, 2015, FDA issued a letter suspending the license of United States Blood Bank, Inc. (USBB). During a recent inspection of USBB, FDA identified deviations from applicable sections of the Code of Federal Regulations and the standards in USBB's license. Based on the observations cited in the suspension letter, FDA has reasonable justification to believe that grounds for revocation of the license exist under 21 CFR 601.5(b)(1)(iv), and that the establishment's operations present a danger to the public health.

On June 1, 2015, the Transmissible Spongiform Encephalopathies Advisory Committee (TSEAC) met in open session to hear presentations from FDA on a risk assessment for global geographic-based variant Creutzfeldt-Jakob disease (vCJD) risk for US donors, and current measures to reduce the risk of vCJD from transfusion in the United States.

TSEAC discussed FDA's geographical-based donor deferral policies and other strategies, including leukocyte reduction of blood components, to reduce the risk of transfusion-transmitted vCJD. FDA was seeking the advice of the Committee in developing future recommendations to reduce this risk. The committee also heard update presentations on the following topics:

- the vCJD situation worldwide
- an update on the United Kingdom's Transfusion Medicine Epidemiological Review
- vCJD in the United States
- the bovine spongiform encephalopathy (BSE) situation worldwide
- U.S. Department of Agriculture's regulatory approaches to reduce risk of foodborne BSE exposure.

On May 22, 2015, FDA issued a Federal Register notice of final rulemaking entitled, "Requirements for Blood and Blood Components Intended for Transfusion or for Further Manufacturing Use." This final rule, which becomes effective on May 23, 2016, revises and updates existing regulations that require blood establishments to assess a donor's medical history to determine that the donor is in good health and to screen the donor for factors that can adversely affect the safety, purity, or potency of blood and blood components. The final rule contains a flexible approach that will allow FDA to add or remove test requirements based on changes in science including epidemiology or technological advancements. The rule was initiated as part of the Department of Health and Human Services' Blood Action Plan. The Blood Action Plan was developed in 1998 in response to recommendations from Congress, the Government Accountability Office, and the Institute of Medicine. The rulemaking is one of the final remaining action items under the Blood Action Plan. FDA participated in industry webinars explaining the new rule in September and October. In addition, FDA also presented the requirements of the new rule and responded to industry inquiries at the annual AABB meeting in October 2015.

In May 2015, FDA's Blood Products Advisory Committee met in open session to discuss strategies for implementation of serological and nucleic acid testing for Babesia microti in blood donors. The committee also heard update presentations on the following topics:

- FDA considerations for Hemoglobin S Testing in blood donors
- FDA considerations for revised blood donor deferral policy for men who have sex with men

In December 2014, FDA announced it will take the necessary steps to recommend a change to the blood donor deferral period for men who have sex with men from indefinite deferral to one year since the last sexual contact. This decision was made following a review by FDA and Health and Human Services (HHS), and taking into account the recommendations of advisory committees to HHS and FDA, In May 2015, FDA issued a draft guidance entitled "Revised Recommendations for Reducing the Risk of Human Immunodeficiency Virus Transmission by Blood and Blood Products," which recommended this proposed change in policy. The finalized guidance was recently issued in December 2015.

Enhancing the Surveillance of Biological Products

FDA continues to enhance how it monitors the marketplace to help protect patients and ensure that products are safe and effective. The surveillance of biological products is an evolving effort that continues to require enhanced methods, technology, and collaboration.

In September 2015, FDA posted a protocol for a study entitled "Kawasaki Disease and PCV13 Vaccine" to the Sentinel website. The study used PRISM to evaluate Kawasaki Disease and Prevnar 13, a pneumococcal conjugate vaccine.

In September 2015, FDA posted a protocol for a study entitled "Influenza Vaccines and Febrile Seizures in the 2013-2014 and 2014-2015 Influenza Seasons." This study will assess the risk of febrile seizures following inactivated influenza vaccination (IIV) with or without concomitant Prevnar 13 (PCV13) by influenza vaccination during the 2013-14 and 2014-15 influenza seasons among children ages 6 months through 23 months of age.

In April 2015, FDA posted the results of a Post Licensure Rapid Immunization Safety Monitoring System (PRISM) study which evaluated more than 650,000 females, ages 9 -23 years

of age and more than 1.4 million doses of the human papillomavirus vaccine, Gardasil and found no association between venous thromboembolism and Gardasil.

In April 2015, FDA posted the results of a report entitled "Accessing the Freshest Feasible Data for Conducting Active Influenza Vaccine Safety Surveillance (PRISM)." The objective of this activity was 1) to establish and assess an active surveillance system for seasonal influenza vaccines; 2) to conduct near real-time surveillance for two health outcomes of interest, anaphylaxis and seizure, following influenza vaccination.

FDA initiated a pilot study of TreeSCAN utilizing PRISM data for the Gardasil 4 vaccine and a revised protocol for a pilot study of TreeSCAN utilizing PRISM data for the HPV4 Vaccine was posted to the Mini-Sentinel website on March 30, 2015.

FDA also engaged a new partnership with Hospital Corporation of America to enable safety assessments of intravenously administered medical products in the hospital setting, where the majority of blood and blood-derived products are administered.

FDA is planning the first protocol-based study designed to mine healthcare data in Sentinel and to detect if there are any serious, unexpected adverse events after vaccination for Gardasil 9.

FDA responded to eight potential, three ongoing, and one new product shortage in FY 2015.

In an effort to streamline the recall process, in FY 2015 FDA began delegating class I recall authority to the Centers. Class I recalls are the highest risk recalls and are conducted in a situation in which there is a reasonable probability that the use of, or exposure to, a violative product will cause serious adverse health consequences or death. The delegation of Class I recall authority streamlines the review and approval process for Class I recalls resulting in earlier issuance of a notice of recall classification determination to a firm. A notice communicates FDA's decision and the firm's responsibilities under 21 CFR part 7, Subpart C – Recalls, Including Product Corrections – Guidance on Policy, Procedures, and Industry Responsibilities. Further, earlier notification results in the publication of the recall and its classification in FDA's Enforcement Report in a timelier manner.

In FY 2015, FDA classified two Class I (highest risk), 466 Class II (lower risk), and 183 Class III (lowest risk) recalls of biologic products. Additionally in FY 2015, FDA issued four warning letters related to biologic products.

Selected Guidances Published in 2015

Below are guidances issued by FDA in the last calendar year. These guidances help address various issues.[35]

[35] Complete information on CBER guidances can be found at: http://www.fda.gov/BiologicsBloodVaccines/GuidanceComplianceRegulatoryInformation/http://www.fda.gov/BiologicsBloodVaccines/GuidanceComplianceRegulatoryInformation/Guidances

Date	#	Title	Description
Dec 2015	FDA-2015-D-1211-0098	Revised Recommendations for Reducing the Risk of Human Immunodeficiency Virus Transmission by Blood and Blood Products; Guidance for Industry	Provides blood establishments that collect blood or blood components with revised donor deferral recommendations for individuals at increased risk for transmitting HIV infection
Feb 2015	FDA-2015-D-0349	Investigating and Reporting Adverse Reactions Related to Human Cells, Tissues, and Cellular and Tissue-Based Products (HCT/Ps) Regulated Solely under Section 361 of the Public Health Service Act and 21 CFR Part 1271; Draft Guidance	Provides recommendations for complying with the requirements for investigating and reporting adverse reactions involving communicable disease in recipients of HCT/Ps
Feb 2015	FDA-2004-D-0500	Brief Summary and Adequate Directions for Use: Disclosing Risk Information in Consumer-Directed Print Advertisements and Promotional Labeling for Human Prescription Drugs	Assists manufacturers, packers, and distributors with meeting requirements for drug advertising and the requirement that directions for use be included with promotional labeling when print materials are for consumers
Feb 2015	FDA-2014-D-1525	Mixing, Diluting, or Repackaging Biological Products Outside the Scope of an Approved Biologics License Application	Describes when FDA will act against a state-licensed pharmacy, Federal facility, or outsourcing facility that mixes, dilutes, or repackages biological products without a biologics license application

Selected Rules Published in 2015

Below are rules published by CBER in the last calendar year. These rules help address various issues. [36]

Date	#	Title	Description
May 2015	FDA-2006-N-0040-0009	Requirements for Blood and Blood Components Intended for Transfusion or for further Manufacturing Use	Revises existing regulations requiring blood establishments to assess medical history and screen for factors that can affect the safety, purity, or potency of blood and blood components.

[36] For more information on FDA rules please visit http://www.fda.gov/RegulatoryInformation/RulesRegulations/default.htm.

FUNDING HISTORY

Fiscal Year	Program Level	Budget Authority	User Fees
FY 2013 Actual	$296,866,000	$194,638,000	$102,228,000
FY 2014 Actual	$321,064,000	$210,912,000	$110,152,000
FY 2015 Actual	$326,290,000	$211,362,000	$114,928,000
FY 2016 Enacted	$354,901,000	$215,443,000	$139,458,000
FY 2017 President's Budget	$359,989,000	$215,443,000	$144,546,000

BUDGET REQUEST

The FY 2017 Budget Request is $359,989,000, of which $215,443,000 is budget authority and $144,546,000 is user fees. The budget authority remains the same compared to the FY 2016 Enacted level and user fees increase by $5,088,000. The FY 2017 Budget allows the Biologics Program to advance public health through innovative regulation that promotes the safety, purity, potency, effectiveness, and timely delivery of biological products to patients.

FDA will to continue to facilitate the development of science and new technologies to bring products to market by:

- developing and issuing guidance and regulations to communicate scientific and regulatory requirements
- providing recommendations and frameworks for product development
- developing policy
- taking appropriate regulatory actions on premarket product submissions.

In addition, FDA will advance regulatory research to facilitate product review and will use tools, including regulatory science, to effectively evaluate products and improve predictability, consistency, transparency, and efficiency of the review process.

FDA will strive to ensure the safety of biological products by conducting a robust postmarket program after products are approved and evaluating the results of clinical studies, including collecting, analyzing, and acting on product, patient, and consumer information and healthcare data to move to active surveillance. In addition, FDA will use statistical data analysis and mathematical models for improved epidemiological and risk assessment of regulated products.

FDA is also strategizing to harmonize existing regulatory standards and is cooperating with international scientific efforts to establish and maintain reference materials and standards for biologics. FDA will also improve global public health through international collaboration by facilitating global access to vaccines and biological products that address critical health needs, including promoting research and sharing information to address global diseases and emerging threats impacting human populations. In addition, FDA will continue to address threats as a result of bioterrorism, pandemic, and emerging infectious diseases, including facilitating development, evaluation, and availability of high-priority medical products and countermeasures.

In 2016, FDA will continue building the infrastructure to process electronic New Drug Applications, Abbreviated New Drug Applications, Biologic License Applications, and Investigational New Drug submissions for biological products. FDA will support electronic

registration and integration of the Unique Facility Identifier into IT systems that support ORA's medical product related regulatory work, including ORA's Official Establishment Inventory (OEI).

FDA will also continue to support the President's National Strategy for Combating Antibiotic Resistant Bacteria, by facilitating the development of better diagnostics, therapeutics, and vaccines for the management of antimicrobial resistant organisms. FDA will use animal model development to support vaccine and antimicrobial drug development for high priority bacterial pathogens such as *Staphylococcus aureus*, *Mycobacterium tuberculosis* (TB), *Klebsiella pneumonia*, and *Clostridium difficile*.

USER FEES

Current Law User Fees: +$5.1 million

Center: +$5.0 million / Field: +$0.1 million

The Biologics Program request includes an increase of $5.1 million for current law user fees, which will allow FDA to fulfill its mission of protecting the public health, treating and curing diseases, and accelerating innovation in the industry.

PERFORMANCE

The Biologics Program's performance measures focus on biological product review, manufacturing diversity and capacity for influenza vaccine production, strengthening detection and surveillance of FDA-regulated products and postmarket inspections in order to ensure the safety, purity, potency, and effectiveness of biological products, as detailed in the following table.

The following selected items highlight notable results and trends detailed in the performance table.

Measure	Year and Most Recent Result / Target for Recent Result (Summary of Result)	FY 2016 Target	FY 2017 Target	FY 2017 +/- FY 2016
233207: Review and act on standard New Molecular Entity (NME) New Drug Application (NDA) and original BLA submissions within 10 months of the 60 day filing date. *(Output)*	FY 2014: 100% Target 90% (Target Exceeded)	90%	90%	Maintain
233208: Review and act on priority NME NDA and original BLA submissions within 6 months of the 60 day filing date. *(Output)*	FY 2014: 100% Target 90% (Target Exceeded)	90%	90%	Maintain

Measure	Year and Most Recent Result / Target for Recent Result (Summary of Result)	FY 2016 Target	FY 2017 Target	FY 2017 +/- FY 2016
233209: Review and act on standard non-NME original NDA submissions within 10 months of receipt. *(Output)*	FY 2014: NA (No submissions received)	90%	90%	Maintain
233210: Review and act on priority non-NME original NDA submissions within 6 months of receipt. *(Output)*	FY 2014: NA (No submissions received)	90%	90%	Maintain
233205: Complete review and action on complete blood bank and source plasma BLA submissions within 12 months after submission date. *(Output)*	FY 2014: 100% Target: 90% (Target Exceeded)	90%	90%	Maintain
233206: Complete review and action on complete blood bank and source plasma BLA supplements within 12 months after submission date. *(Output)*	FY 2014: 100% Target: 90% (Target Exceeded)	90%	90%	Maintain
233211: Review and act on new non-user fee, non-blood product applications within 12 months of receipt. *(Output)*	FY 2014: 100% Target: 60% (Target Exceeded)	60%	60%	Maintain
234101: Increase manufacturing diversity and capacity for influenza vaccine production. *(Output)*	FY 2015: Continued evaluation of new methods to produce high-yield influenza vaccine reference strains. (Target Met)	Continue evaluation of new methods to produce high-yield influenza vaccine reference strains	Continue evaluation of new methods to produce high-yield influenza vaccine reference strains	N/A

Measure	Year and Most Recent Result / Target for Recent Result (Summary of Result)	FY 2016 Target	FY 2017 Target	FY 2017 +/- FY 2016
231301: Percentage of Lot Distribution Reports that were entered into the Regulatory Management System – Biologics License Applications (RMS-BLA) within 7 Days.	FY 2015: 95% (Historical Actual)	85%	85%	Maintain
234202: Number of registered domestic blood bank and biologics manufacturing inspections. *(Output)*	FY 2015: 957 Target: 900 (Target Exceeded)	900	900	Maintain
234203: Number of human foreign and domestic tissue establishment inspections. *(Output)*	FY 2015: 656 Target: 570 (Target Exceeded)	570	570	Maintain

Review Performance Measures
FDA continues to exceed PDUFA and non-user fee, non-blood product, and blood bank and source plasma review measures. Performance results for FY 2015 will not be available until the review of the applications for the FY 2015 cohort is complete, typically sometime within the next fiscal year. The non-New Molecular Entities (NME) performance goals are important because the PDUFA V agreement requires FDA to report on the review performance for non-NME and NME product applications separately. Cohort years where no non-NME applications were submitted by industry are indicated by saying NA for the actual data. For additional information on the PDUFA approvals, see the "Approving New Biological Products" section listed above in the program narrative.

Influenza Performance Measure
This performance measure supports the Department's national preparedness efforts in combating seasonal influenza, by increasing manufacturing diversity and capacity for influenza vaccine production. Further information on this measure can be found in the Department's Online Performance Appendix.

In FY 2015, FDA met the target to continue evaluation of new methods to produce high-yield influenza vaccine reference strains. Activities to meet this target included the following.

FDA continued efforts to develop new methods for determining influenza vaccine potency, an important component in the evaluation of high-yield influenza vaccine viruses. An international collaborative study, involving multiple manufacturers and regulatory agencies, was initiated to compare several alternative methods. The study will continue in FY 2016. In addition, improvements were made to the alternative potency assays under development at FDA that included the ability to accurately measure the potency of influenza B vaccines in addition to influenza A vaccines. Assay development and evaluation will continue in FY 2016.

FDA continued evaluation of methods to assess the relative yields of candidate vaccine viruses. FDA participated in an international collaborative study that compared the influenza virus yields and virus hemagglutinin (HA) production from several candidate vaccine strains. This study is ongoing and will continue in FY 2016. Studies at FDA, designed to increase the yields of candidate vaccines by targeted manipulation of the virus genome, demonstrated the feasibility of improving virus yields for H1N1 vaccine viruses. These studies will continue in FY 2016.

Lot Distribution Report Performance Measure

This is a new performance goal that measures how efficiently FDA gathers and enters information from lot distribution reports that are created by the manufacturer into the Regulatory Management System - Biologics License Applications (RMS-BLA). Quick and reliable access to this information will help FDA conduct epidemiological analyses of adverse event reports in an effort to discover unsafe manufacturing conditions and remove unsafe products from the supply chain before they can do harm to the public.

PROGRAM ACTIVITY DATA

Biologics Program Activity Data (PAD)

CBER Workload and Outputs	FY 2015 Actual	FY 2016 Estimate	FY 2017 Estimate
Original Biologics License Applications (BLA)			
Workload [1]	20	20	20
Total Decisions [2]	36	36	36
Approved	15	15	15
BLA Efficacy Supplements			
Workload [1]	17	17	17
Total Decisions [2]	36	36	36
Approved	16	16	16
BLA Manufacturing Supplements			
Workload [1]	1,084	1,084	1,084
Total Decisions [2]	1,218	1,218	1,218
Approved	1,096	1,096	1,096
BLA Labeling Supplements			
Workload [1]	181	181	181
Total Decisions [2]	189	189	189
Approved	165	165	165
Original New Drug Application (NDA)			
Workload [1]	0	0	0
Total Decisions [2]	1	1	1
Approved	0	0	0
NDA Efficacy Supplements			
Workload [1]	0	0	0
Total Decisions [2]	0	0	0
Approved	0	0	0
NDA Manufacturing Supplements			
Workload [1]	12	12	12
Total Decisions [2]	29	29	29
Approved	22	22	22
NDA Labeling Supplements			
Workload [1]	7	7	7
Total Decisions [2]	7	7	7
Approved	7	7	7
Original Abbreviated New Drug Application			
Workload [1]	0	0	0
Total Decisions [2]	1	1	1
Approved	1	1	1
ANDA Efficacy Supplements			
Workload [1]	0	0	0
Total Decisions [2]	0	0	0
Approved	0	0	0

CBER Workload and Outputs	FY 2015 Actual	FY 2016 Estimate	FY 2017 Estimate
ANDA Manufacturing Supplements			
Workload [1]	2	2	2
Total Decisions [2]	0	0	0
Approved	0	0	0
ANDA Labeling Supplements			
Workload [1]	0	0	0
Total Decisions [2]	3	3	3
Approved	3	3	3
Device 510Ks			
Workload [1]	56	56	56
Total Decisions [2]	87	87	87
Final Decision - SE	39	39	39
Device Premarket Applications (PMA)			
Workload [1]	2	2	2
Total Decisions [2]	9	9	9
Approved	5	5	5
Device Premarket Applications (PMA) Supplements			
Workload [1]	45	45	45
Total Decisions [2]	47	47	47
Approved	22	22	22
Investigational New Drugs (IND)			
Receipts: IND (new)	401	401	401
Receipts: IND Amendments	9,092	9,092	9,092
Total Active IND [3]	2,336	2,336	2,336
Investigational Device Exemptions (IDE)			
Receipts: IDE (new)	18	18	18
Receipts: IDE Amendments	296	296	296
Total Active IDE [3]	144	144	144
Patient Safety			
Adverse Event Reports Received [4]	60,708	62,000	63,000
Biological Deviation Reports Received	46,590	47,000	47,000
Sponsor Assistance Outreach			
Meetings	406	406	406
Final Guidance Documents [5]	34	30	30
Admin/Management Support			
Advisory Committee Meetings Held	8	13	13
FOI Requests Processed	264	320	320

[1] Workload includes applications received and filed.

[2] Total Decisions include approved, denied, withdrawn, approvable, approvable pending inspection, not approvable, exempt, major deficiency, substantially equivalent (SE), not substantially equivalent (NSE), de novo and complete response (CR).

[3] Total Active includes investigational applications received and existing applications for which CBER has received at least one amendment (IND) or supplement (IDE) during the FY being reported.

[4] Includes MedWatch, Foreign reports and VAERS reports. Does not include Fatality Reports or Medical Device Reports for CBER-regulated medical devices.

[5] Includes all FDA final guidances issued by CBER and other FDA centers that pertain to biological products.

Field Biologics Program Activity Data (PAD)

Field Biologics Program Workload and Outputs	FY 2015 Actuals	FY 2016 Estimate	FY 2017 Estimate
FDA WORK			
DOMESTIC INSPECTIONS			
UNIQUE COUNT OF FDA DOMESTIC BIOLOGICS ESTABLISHMENT INSPECTIONS	***1,835***	***2,047***	***2,047***
Bioresearch Monitoring Program Inspections	97	100	100
Blood Bank Inspections	893	1,060	1,060
Source Plasma Inspections	175	194	194
Pre-License, Pre-Market Inspections	54	7	7
GMP Inspections	27	28	28
GMP (Device) Inspections	6	7	7
Human Tissue Inspections	600	661	661
FOREIGN INSPECTIONS			
UNIQUE COUNT OF FDA FOREIGN BIOLOGICS ESTABLISHMENT INSPECTIONS	***67***	***47***	***47***
Bioresearch Monitoring Program Inspections	19	11	11
Foreign Human Tissue Inspections	1	0	0
Blood Bank Inspections	7	8	8
Pre-License, Pre-market Inspections	8	2	2
GMP Inspections (Biologics & Device)	32	20	20
TOTAL UNIQUE COUNT OF FDA BIOLOGIC ESTABLISHMENT INSPECTIONS	***1,902***	***2,094***	***2,094***
IMPORTS			
Import Field Exams/Tests	85	45	45
Import Line Decisions	150,673	176,313	206,317
Percent of Import Lines Physically Examined	0.06%	0.03%	0.02%
GRAND TOTAL BIOLOGICS ESTABLISHMENT INSPECTIONS	***1,902***	***2,094***	***2,094***

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ANIMAL DRUGS AND FEED

(Dollars in Thousands)	FY 2015 Final	FY 2015 Actuals	FY 2016 Enacted	FY 2017 President's Budget	FY 2017 +/- FY 2016
Animal Drugs and Feed	**174,783**	**175,024**	**188,632**	**196,736**	**8,104**
Budget Authority	***147,577***	***147,564***	***158,652***	***161,852***	***3,200***
User Fees	***27,206***	***27,460***	***29,980***	***34,884***	***4,904***
Center	119,314	120,925	122,508	129,533	7,025
Budget Authority	93,505	93,496	94,005	97,205	3,200
User Fees	25,809	27,429	28,503	32,328	3,825
Animal Drug (ADUFA)	*19,814*	*19,357*	*20,125*	*20,265*	140
Animal Generic Drug (AGDUFA)	*5,995*	*8,072*	*8,378*	*8,949*	571
Food and Feed Recall	---	---	---	---	---
Food Facility Registration and Inspection	---	---	---	*1,586*	1,586
Food Import	---	---	---	*1,528*	1,528
Field	55,469	54,099	66,124	67,203	1,079
Budget Authority	54,072	54,068	64,647	64,647	---
User Fees	1,397	31	1,477	2,556	1,079
Animal Drug (ADUFA)	*404*	*31*	*411*	*414*	3
Animal Generic Drug (AGDUFA)	*186*	---	*259*	*277*	18
Food and Feed Recall	---	---	---	---	---
Food Reinspection	*807*	---	*807*	*807*	---
Food Facility Registration and Inspection	---	---	---	*1,058*	1,058
FTE	**851**	**880**	**910**	**933**	**23**

Authorizing Legislation: Federal Food, Drug, and Cosmetic Act (21 U.S.C. 321-399); Public Health Service Act (42 U.S.C. 201, *et seq.*); Animal Drug Amendments (1968) (21 U.S.C. 360b); Generic Animal Drug and Patent Term Restoration Act (1988); Animal Medicinal Drug Use Clarification Act of 1994; Animal Drug Availability Act of 1996; FDA Export Reform and Enhancement Act of 1996; Food and Drug Administration Modernization Act of 1997; Antimicrobial Regulation Technical Corrections Act of 1998; Public Health Security and Bioterrorism Preparedness and Response Act of 2002; Animal Drug User Fee Act of 2003 (21 U.S.C. 379j-11 - 379j-12); Minor Use and Minor Species Animal Health Act of 2004; Sanitary Food Transportation Act of 2005; Food and Drug Administration Amendment Act of 2007; Animal Drug User Fee Amendments of 2008 (P.L. 110-316); Animal Generic Drug User Fee Act of 2008 (P.L. 110-316); Patient Protection and Affordable Care Act; FDA Food Safety Modernization Act (P.L. 111-353); FDA Safety and Innovation Act (P.L. 112-144); Animal Drug User Fee Reauthorization Act of 2013 (P.L. 113-14); Animal Generic Drug User Fee Reauthorization Act of 2013 (P.L. 113-14); Drug Quality and Security Act (2013)

Allocation Methods: Competitive grant; Contract; Direct Federal/intramural

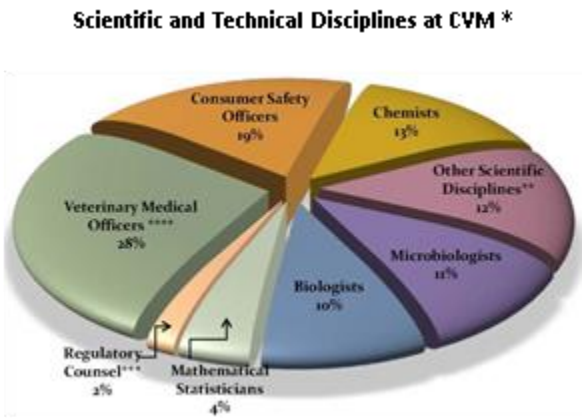
PROGRAM DESCRIPTION AND ACCOMPLISHMENTS

The Animal Drugs and Feeds Program began in 1968 with the amendment of the Federal Food, Drug, and Cosmetic (FD&C) Act to include new authorities for regulating animal drugs, devices, and feed. The Animal Drugs and Feeds Program is a component of the FDA Foods and Veterinary Medicine (FVM) Program. The purpose of the FVM Program is to protect and promote the health of humans and animals by ensuring the safety of the American food supply, as well as the safety of animal feed and devices and the safety and effectiveness of animal drugs.

The FVM Program comprises the Animal Drugs and Feeds and the Foods Programs, including field activities in the Office of Regulatory Affairs (ORA). The operations of the Animal Drugs and Feeds and the Foods Programs are administered by the Center for Veterinary Medicine (CVM) and the Center for Food Safety and Applied Nutrition (CFSAN) respectively, both in

collaboration with ORA. The Office of Foods and Veterinary Medicine provides leadership and strategic direction to the FVM Program.

The Animal Drugs and Feeds Program supports FDA's mission by approving safe and effective products for animals and by enforcing applicable provisions of the FD&C Act and other authorities. Safe and effective animal drugs and feeds play an important role in protecting animal health and the safety of America's food supply.



Congress recognized the unique challenges FDA faces in the area of food safety in the 21st Century and gave FDA a modern legislative mandate to meet these challenges by enacting the FDA Food Safety Modernization Act (FSMA). FSMA directs FDA to build a food and feed safety system based on the public health principle of comprehensive prevention, an enhanced focus on risk-based resource allocation, and partnerships across the public and private sectors to minimize hazards from farm to table.

The FDA FVM Program Strategic Plan[37] provides a framework for the implementation of FSMA and places a high priority on the prevention of foodborne illness of both unknown origins and illness that can be specifically attributed to known sources. FVM also regulates the safety and effectiveness of animal drugs. In support of this endeavor, the Animal Drugs and Feeds Program is aligned with the FVM Strategic Plan goals of standards setting, compliance, risk assessment and regulatory science, nutrition and food labeling, response, and animal drug safety.

To achieve the goals of the FVM Strategic Plan, the Animal Drugs and Feeds Program focuses on:

- timely premarket review of new animal drugs
- appropriate use of approved animal drugs
- scientific research solutions for the safety of animal-derived food and health products
- minimizing the illegal sale of compounded and unapproved drugs
- prevention of marketing of unsafe products.

The Animal Drugs and Feeds Program also ensures that animal drugs and feeds used in the care of food-producing animals do not result in unsafe residues in food products, such as milk, that are harvested or produced from these animals. Further, the program protects the health of companion animals and addresses zoonotic diseases – animal diseases that can be transmitted to humans. It also ensures a food supply that is safe for both humans and animals, and protects

[37] The strategic plan can be found at: http://www.fda.gov/downloads/AboutFDA/CentersOffices/OfficeofFoods/UCM273732.pdf.
*Total CVM FTEs are 564. Data as of FY15.
**Includes Animal Scientists, Health Scientists, Toxicologists, Pharmacologists, Pharmacists, Physiologists, Physical Scientists, and Animal Caretakers.
***CVM employs approximately 7 additional employees with a J.D. degree who are in positions with titles other than Regulatory Counsel to include Regulatory Policy Analysts and Regulatory Information Specialists.
****In addition to the number of employees listed here as Veterinary Medical Officers, CVM employs approximately 20 additional employees with a D.V.M./V.M.D. degree who are in positions with titles other than Veterinary Medical Officer.

billions of poultry, cattle, swine, horses and minor animal species, as well as millions of companion animals in the United States.

A combination of appropriations and user fee programs funds the regulatory process to assure product safety and effectiveness. User fees are authorized under the Animal Drug User Fee Act (ADUFA), the Animal Generic Drug User Fee Act (AGDUFA), and the FDA Export Reform and Enhancement Act (Export Certificate program).

The ADUFA and AGDUFA user fee programs supplement the appropriated portion of the new animal drug review program to continue improving the quality and timeliness of the pioneer animal drug and generic new animal drug review processes. The Export Certificate program promotes the export of products made in the U.S., facilitates international trade, and provides assurance the products exported can be marketed in the U.S. or meet specific U.S. regulations.

Recent major accomplishments include critical work on combating antimicrobial resistance, which has included the publication of Guidance for Industry #213 to support the judicious use of antimicrobials. FDA published the final Veterinary Feed Directive in FY 2015 to bring the use of all medically important antibacterial drugs in animal feed under the oversight of licensed veterinarians.

Other major accomplishments are the extensive work on the "Current Good Manufacturing Practice and Hazard Analysis and Risk-Based Preventive Controls for Food for Animals" final FSMA rule and the use of grant funds to bolster efforts to validate testing methods as part of the Veterinary Laboratory Investigation and Response Network (Vet-LIRN).

The following selected accomplishments demonstrate the Animal Drugs and Feeds Program's delivery of its regulatory and public health responsibilities within the context of current priorities.[38]

Improve and Safeguard Access

The Animal Drugs and Feeds Program is responsible for regulating animal drugs and feeds. Premarket responsibilities include ensuring the product review process is as effective and efficient as possible, and working collaboratively with partners in the private sector, public sector, and academia to facilitate product development. Within this goal area, the Program addresses the following FDA Strategic Priorities:

- Safety and Quality,
- Regulatory Science, and
- Globalization.

Animal Drug Review

The Animal Drugs and Feeds Program increases the availability and diversity of safe and effective products that relieve animal pain and suffering, sustain their health, and do not compromise human health. The animal drug user fee acts require that FDA meet specified timeframes for review and action on 90 percent of new animal drug applications received during a fiscal year.

[38] Please visit www.fda.gov for additional program information and detailed news items.

FDA exceeded all performance goals and completed the review and action on 98.3 percent of original New Animal Drug Applications (NADAs) and other ADUFA sentinel submissions within timeframes specified by ADUFA for applications received and reviewed in FY 2014. FDA also exceeded the performance goals and completed the review and action on 100 percent of original Abbreviated New Animal Drugs Applications (ANADAs) and Reactivations and other AGDUFA sentinel submissions as required and within the timeframes for applications received and reviewed in FY 2014.

Selected Product Approvals

Below are the most recent Animal Drugs and Feeds Program significant product approvals that occurred during calendar year 2015. This list does not represent any degree of importance or priority ranking of products.[39]

Date	Product Name	Purpose or Benefit
Sep 2015	CLARO (Florfenicol, terbinafine, mometasone furoate)	For the treatment of inflammation of the outer ear and ear canal in dogs associated with susceptible strains of yeast and bacteria
Aug 2015	ONSIOR (robenacoxib)	For the control of postoperative pain and inflammation associated with orthopedic surgery, ovariohysterectomy and castration in cats over 4 months of age
Aug 2015	LUTALYSE HighCon Injection (dinoprost tromethamine)	For estrus synchronization and treatment of chronic endometritis in cattle. Use with FACTREL to synchronize estrous cycles to allow fixed-time artificial insemination in lactating cows
Jun 2015	CORAXIS (moxidectin)	For the prevention of heartworm disease and treatment of hookworm in dogs that are at least 7 weeks old and weigh at least 3 pounds
May 2015	KAVAULT (avilamycin) Type A Medicated Article	For the reduction in incidence and overall severity of diarrhea in the presence of pathogenic *Escherichia coli* in groups of weaned pigs.

The term "Significant Approvals" means the approval of an original or supplemental NADA or ANADA that required CVM's review of safety or effectiveness data. This type of approval applies to new animal drug products, new chemical entities, or changes such as:

- additions to the indication section of the label of a new target species
- a new significant class of target animals
- a new disease indication
- a new route of administration
- a new tolerance or withdrawal period.

In FY 2015, FDA approved three generic copies of RIMADYL (carprofen), one an injectable solution and two oral tablets, providing veterinarians and dog owners with greater access to drugs for the relief of pain and inflammation associated with osteoarthritis and for the control of post-operative pain associated with soft tissue and orthopedic surgery.

[39] For more information on product approvals and designations visit http://www.fda.gov/NewsEvents/ProductsApprovals/.

In November 2015, FDA approved an application related to AquAdvantage Salmon, an Atlantic salmon that is genetically engineered (GE) to reach a growth point important to the aquaculture industry faster than its non-GE counterpart. FDA regulates GE animals under the new animal drug provisions of the Federal Food, Drug, and Cosmetic Act because the recombinant DNA (rDNA) construct introduced into the animal meets the definition of a drug. In this case, the rDNA construct introduces a trait that makes the AquAdvantage Salmon reach a key growth point faster. FDA found that AquAdvantage Salmon is safe for consumption, the rDNA construct is safe for the fish itself, and the salmon meets the sponsor's claim about faster growth. FDA also found that there are no material differences between this GE salmon and its non-GE counterpart that would require additional labeling.

Additionally, in December 2015, FDA approved Kanuma (sebelipase alfa) as the first treatment for humans with a rare disease known as lysosomal acid lipase (LAL) deficiency. Patients with LAL deficiency have no or little LAL enzyme activity resulting in a build-up of fats within the cells of various tissues that can lead to liver and cardiovascular disease and other complications. The approval was a collaboration between the Center for Veterinary Medicine (CVM) and the Center for Drug Evaluation and Research (CDER). CVM approved an application for a recombinant DNA (rDNA) construct in chickens that are genetically engineered (GE) to produce a recombinant form of human lysosomal acid lipase (rhLAL) protein in their egg whites. CDER approved the human therapeutic biologic (Kanuma), which is purified from those egg whites, based on its safety and efficacy in humans with LAL deficiency. FDA has worked closely with the sponsors to assure that these GE chickens, and their eggs, do not enter the food chain.

Selected Guidances Issued 2015

Below are guidances issued by the Animal Drugs and Feeds Program in 2015. These guidances help address various issues and can be further described in the attached links and narratives in this section.[40]

Date Issued	#	Title	Description
Oct 2015	FDA-2015-D-0235	Evaluating the Effectiveness of New Animal Drugs for the Reduction of Pathogenic Shiga Toxin-Producing *E. coli* in Cattle	Final - Recommendations on study design and criteria to evaluate effectiveness of new animal drugs to reduce pathogenic Shiga toxin producing Escherichia coli in cattle
Sep 2015	FDA-2014-D-1177	Electronic Exchange of Documents: File Format Recommendations	Final - Recommendations on global harmonization of the specifications for the electronic file format of documents between industry and regulatory authorities.

[40] For more information on guidance please visit http://www.fda.gov/RegulatoryInformation/Guidances/.

Date Issued	#	Title	Description
Jun 2015	FDA-2014-D-0634	Cell-based Products for Animal Use	Final - To clarify FDA's jurisdiction over cell-based products meeting the definition of a new animal drug and how existing regulations apply to cell-based products
Mar 2015	FDA-2015-D-0839	Target Animal Safety Data Presentation and Statistical Analysis	Recommendations on presentation and statistical analyses of target animal safety data submitted as part of a study report supporting a new animal drug approval

In October 2015, FDA issued final Guidance for Industry #229 "Evaluating the Effectiveness of New Animal Drugs for the Reduction of Pathogenic Shiga Toxin-Producing *E. coli* in Cattle" providing recommendations to industry relating to study design and describes criteria that CVM has determined are the most appropriate for evaluating the effectiveness of new animal drugs intended to reduce pathogenic Shiga toxin-producing *E. coli* (STEC) in cattle.

CVM will evaluate study designs to support indications for the reduction in the prevalence or quantity of pathogenic STEC in live animal feces, taken several times during the animals' lives throughout the study, which contaminate beef carcasses primarily during the removal of an animal's hide.

On June 11, 2015, FDA issued final Guidance for Industry #218 "Cell-Based Products for Animal Use" describing FDA's current thinking on cell-based products for animal use that meet the definition of a new animal drug. The guidance is directed at facilities and individuals manufacturing and marketing such products for animal use.

A cell-based product – including an animal stem cell-based product – that is intended to diagnose, cure, mitigate, treat, or prevent disease in animals or is intended to affect the structure or function of the animal generally meets the definition of a new animal drug. Cell-based products that meet the definition of a new animal drug are subject to the same statutory and regulatory requirements as other new animal drugs and require an approved or conditionally approved NADA or index listing to be legally marketed.

Animal Drug Inspections

FDA's field force conducts preapproval inspections to support the review of premarket applications for pioneer and generic animal drugs. In addition to aiding the preapproval process, bioresearch monitoring (BIMO) inspections of study facilities, clinical investigators, or sponsors, or contract research organizations are conducted to help assure the integrity of scientific testing and the reliability of test data submitted to FDA.

Once animal drug products are available on the market, the field continues oversight by inspecting manufacturing establishments to determine their ability to manufacture the product to the specifications stated in their application and to ensure manufactured products are free from contaminants.

Also, FDA performs inspections of non-clinical laboratories engaged in the collection of data to determine whether Good Laboratory Practices have been followed. Accurate data is essential to

the review and approval of new animal drugs and helps to ensure that the rights and welfare of animals are protected.

Minor Use Minor Species
FDA reviews conditional drug approvals, designation requests, and index requests to increase the number of safe and effective new animal drug products available for minor animal species and uncommon diseases in major animal species. Conditional approval allows animal drugs for minor use or minor species for infrequent conditions or in a limited population. The drug company must only show the drug to have a "reasonable expectation of effectiveness" without proving that it meets the "substantial evidence" standard of effectiveness for full approval.

Sponsors of "designated" new animal drugs are eligible to apply for grants to support safety and effectiveness testing. FDA administers a grant program to support the development of these new drugs. As of December 10, 2015, FDA granted 134 drug designations. In September 2015, FDA added Chlorambucil, an oral drug for the treatment of chronic lymphocytic leukemia in dogs, to the designation list.

In some cases, a minor species drug is intended for use in species that are too rare or too varied to be the subject of adequate and well-controlled studies in support of a drug approval and therefore cannot reasonably go through the standard drug approval process. In such cases, FDA may add the drug to the Index of Legally Marketed Unapproved New Animal Drugs for Minor Species (the Index). As of December 10, 2015, FDA has a total of eleven animal drugs on the Index.

International Activities
The Animal Drugs and Feeds Program engages in numerous international partnerships that promote and protect animals, as well as the humans who are exposed to them, and develop harmonized product standards and conformity assessment procedures, which help regulators ensure that health, safety or environmental conditions are met. FDA partners with the European Food Safety Authority (EFSA) on the Animal Feed Cluster, which allows feed safety experts from both FDA and EFSA to discuss issues of joint interest such as reviews of safety assessments of various animal feed ingredients.

FDA is also a major participant in the International Cooperation on Harmonization of Technical Requirements for Registration of Veterinary Medicinal Products (VICH). In FY 2015, FDA continued serving on the VICH Steering Committee and chaired a workgroup to finish developing a strategy for international training directed to developing countries.

The Animal Drugs and Feeds Program has a strong partnership with Health Canada through the U.S.- Canada Regulatory Cooperation Council (RCC), a council that works to reduce unnecessary regulatory differences. The Veterinary Drug Initiative (VDI), a part of the RCC that enhances the premarket evaluation of veterinary drugs, encourages the U.S. and Canada to seek greater alignment in regulatory approaches to:

- remove duplicative requirements
- reduce costs
- provide timely access to animal drug products.

The cornerstone of the RCC action plan to advance regulatory cooperation was the inaugural simultaneous review by regulators in FDA and Health Canada's Veterinary Drug Directorate

(VDD) of Elanco's veterinary drug product, Comfortis. Since the approval of Comfortis, continued and steady progress has been achieved by both the U.S. and Canada.

Moreover, with the onset of the FSMA, deliberative efforts were made to expand the class of medicines to include both food and non-food animals. The Animal Drugs and Feeds Program participated in many sponsor meetings with RCC on products under simultaneous review, continuing to promote the concurrent availability of drugs and expanding applications under joint review by 25%.

In October 2015, the RCC conducted a successful stakeholder meeting addressing international stakeholder concerns; completed the Regulatory Partnership Statement[41]; and collaborated with VDD to draft the Joint Forward Plan[42], which was distributed to the public in June 2015.

In FY 2015, import field investigators performed more than 6,353 field and label examinations on entry lines of animal drugs and feeds. These activities were performed to identify violations, such as verifying the product matches the information transmitted electronically and the product labeling meets applicable compliance requirements.

Enhance Oversight

The Animal Drugs and Feeds Program protects human and animal health by ensuring that animal drugs and feeds including medicated feed are safe and effective and that food from treated animals is safe to eat. To accomplish this goal, the Program provides critical oversight of production, manufacturing, and the global supply chain for regulated products. The Program also provides surveillance of postmarket product use and assures the safety of FDA regulated products. Within this goal area, the following FDA Strategic Priorities are addressed:

- Safety
- Quality, and
- Regulatory Science.

In 2015, the FSMA Preventive Control (PC) Training Workgroups began developing current good manufacturing practices and the PC Animal Food Regulator training curriculum, in coordination with the Division of Human Resource Development. These accomplishments represent significant collaborate efforts among experts from CVM, CFSAN, ORA, and state regulatory partners. Courses will begin during FY 2016.

Selected Rules Published 2015

Below are rules published by the Animal Drugs and Feeds Program in 2015. These rules help address various issues and are further described in the attached links and narratives in this section.[43]

[41] The RCC Regulatory Partnership Statement can be found at: http://www.trade.gov/rcc/documents/a-rps-hc-fda-rps.pdf
[42] The RCC Joint Forward Plan can be found at: https://www.whitehouse.gov/sites/default/files/omb/oira/irc/us-canada-rcc-joint-forward-plan.pdf
[43] For more information on FDA rules please visit http://www.fda.gov/RegulatoryInformation/RulesRegulations/default.htm.

Date Issued	#	Title	Purpose or Benefit
Sep 2015	FDA-2011-N-0922	Current Good Manufacturing Practice and Hazard Analysis and Risk-Based Preventive Controls for Food for Animals (final rule)	Preventive Controls for Animal Food establish current good manufacturing practices for animal food requiring certain facilities establish and implement hazard analysis and risk-based preventive controls
Jun 2015	FDA-2010-N-0155	Veterinary Feed Directive (final rule)	Amending regulations regarding distribution and use of veterinary feed directive (VFD) drugs to improve efficiency of the VFD program while protecting human and animal health
May 2015	FDA-2012-N-0447	Collect Antimicrobial Sales and Distribution Data by Animal Species (proposed rule)	Proposing administrative procedures for animal drug sponsors who report under ADUFA section 105, including an additional requirement to report species-specific estimates of product sales

Preventive Controls for Animal Food

The Animal Drugs and Feeds Program published the FSMA final rule on "Current Good Manufacturing Practice and Hazard Analysis and Risk-Based Preventive Controls for Food for Animals" in September 2015. Under this rule, facilities that manufacture, process, pack, or hold food for animals, including pet food, would be required to adhere to current good manufacturing practices and implement hazard analysis and risk-based preventive controls.

This rule is one of FDA's foundational rules to implement the modern prevention-focused food safety mandate granted to FDA under FSMA. The final rule is practical, flexible, and effective for industry while still advancing FDA's food safety goals and including requirements from the public input received during the comment period for preventive controls proposals.

Safety Standards

The Animal Drugs and Feeds Program evaluates industry compliance with safety standards throughout the production and handling stages of the global food - including pet food - and feed supply chain. Under FSMA, FDA received the authority to suspend a facility's registration if FDA determines that food and feed manufactured, processed, packed, received, or held by a registered facility has a reasonable probability of causing serious adverse health consequences or death to humans or animals.

Before the passage of FSMA, FDA was able to detain a food product only with credible evidence that the product presented a threat of serious adverse health consequences or death to humans or animals. Training grants have been awarded to state and local food safety partners to ensure consistent implementation and application of the national integrated food safety system and FSMA training requirements related to setting standards and administering training and education programs to state, local, territorial, and tribal food safety officials.

For example, a course in animal production from the medicated feed and food safety perspective was created to address proper use of medicated feeds and avoidance of cross contamination in feed mills. Also, several manuals were developed for the training and education programs regarding production animal management and nutrition for beef and dairy cattle and swine.

In March 2015, FDA issued draft Guidance for Industry #203 "Ensuring Safety of Animal Feed Maintained and Fed On-Farm" to help animal producers ensure the safety of animal feed that is used on-farm. The draft guidance outlines steps animal producers can take to identify and

prevent feed contaminants that are sometimes present in the farm production environment and that may jeopardize the health of farm animals and the safety of human food derived from the animals. The draft guidance accepted public comment through June 3, 2015 and FDA is currently reviewing the submissions.

Intentional Adulteration

The Animal Drugs and Feeds Program played a key role in drafting and publishing the proposed FSMA rule "Forced Mitigation Strategies to Protect Food Against Intentional Adulteration." This rule helps address this important issue and protects the public from potentially catastrophic results including illness and death. FDA anticipates publishing the final rule in FY 2016.

Antimicrobial Resistance

As part of its overall responsibility for ensuring the safety of animal drugs, the Animal Drugs and Feeds Program continues to address public health safety concerns associated with antimicrobial drug use in animals and the related development of antimicrobial resistant bacteria. FDA is a major partner in the White House's National Strategy and Action Plan for Combating Antibiotic-Resistant Bacteria (CARB).

FDA released final Guidance for Industry (GFI) #213 on removing production claims for medically important antimicrobials, requesting affected sponsors to notify FDA in writing within three months of their intent to engage with FDA as defined in GFI #213. All 26 affected sponsors, holding 283 affected applications, confirmed in writing their intent to engage with FDA and have given consent to make their names public. While GFI #213 specified a three-year timeframe - until December 2016 - for drug sponsors to complete the recommended changes to their antimicrobial products, some sponsors have already begun to implement them. FDA issued a biannual progress report on judicious use of antimicrobials in food-producing animals in August 2015[44] to update the public on current and planned activities.

FDA's data on antibiotic use in food-producing animals was used at a joint public meeting on September 30, 2015 with U.S. Department of Agriculture (USDA) and the Centers for Disease Control and Prevention (CDC) in order to measure FDA's judicious use strategy as defined in GFI #213. The data collection plan is intended to provide the data needed to assess the rate of adoption of changes defined in GFI #213, help gauge the success of antibiotic stewardship efforts and guide their continued evolution and optimization, and assess associations between antimicrobial use practices and resistance trends over time.

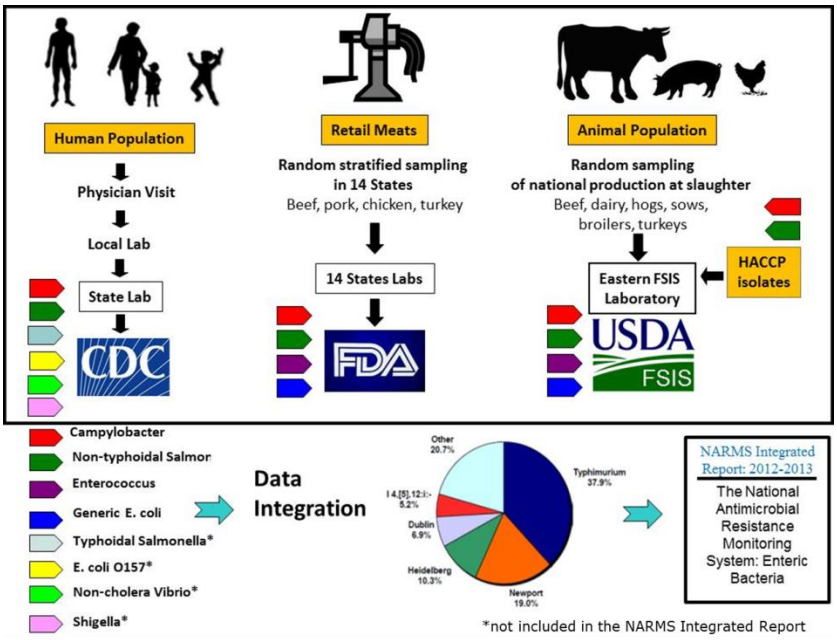
FDA published the Veterinary Feed Directive (VFD) final rule in June 2015,[45] an important piece of the overall strategy to promote the judicious use of antimicrobials in food-producing animals. This strategy will bring the use of these drugs under veterinary supervision so that they are used only when necessary for assuring animal health. The VFD final rule defines the process for authorizing use of VFD drugs - animal drugs intended for use in or on animal feed that require the supervision of a licensed veterinarian - and provides veterinarians in all states with a framework for authorizing the use of medically important antimicrobials in feed when needed for specific animal health purposes.

In September 2015, FDA issued revised Guidance for Industry #120, "Veterinary Feed Directive (VFD) Regulation Questions and Answers", which clarified how a veterinarian can authorize or

[44] The judicious use biannual progress report can be found at: http://www.fda.gov/AnimalVeterinary/NewsEvents/CVMUpdates/ucm459365.htm
[45] The veterinary feed directive final rule can be found at: http://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm448446.htm

limit the use of a VFD drug when used in combination with over-the-counter drugs and also included a question and answer about VFD authorization for pioneer and generic drugs.

FDA revised the annual summary of the amount of antimicrobials sold or distributed for use in food-producing animals reported under Section 105 of the Animal Drug User Fee Act to include additional data tables. The added data tables provide more detailed information and improve transparency. In December 2015, FDA published its sixth annual report under Section 105 for 2014 data, which also includes sales and distribution data for 2013 through 2014. 46 In May 2015, FDA released a proposed rule to collect antimicrobial sales and distribution information by animal species in order to obtain estimates of sales by major food-producing species (cattle, swine, chickens, and turkeys). The additional data would improve understanding about how antimicrobials are sold or distributed for use in major food-producing species and help FDA further target its efforts to ensure judicious use of medically important antimicrobials.



National Antimicrobial Resistance Monitoring System (NARMS)

The Animal Drugs and Feeds Program monitors antimicrobial resistance among enteric (intestinal) bacteria via NARMS. Because NARMS data has played key roles in various regulatory activities, the Animal Drugs and Feeds Program must continue to re-evaluate its sampling approach to assure that the data being generated can withstand scrutiny from both a scientific and regulatory perspective. NARMS implemented a new sampling design within the collaborative surveillance framework that is more statistically representative, scientifically sound, and better supports FDA regulatory activities.

In April 2015, FDA published the NARMS 2012 Retail Meat Annual Report47 and the 2013 NARMS Retail Meat Interim Report.48 These reports measure antimicrobial resistance in certain bacteria isolated from raw meat and poultry collected through NARMS. In August 2015, FDA published online, for the first time, raw NARMS data collected over the past 18 years,

[46] The 2013 Sales and Distribution Data Report can be found at: http://www.fda.gov/downloads/ForIndustry/UserFees/AnimalDrugUserFeeActADUFA/UCM440584.pdf
[47] The NARMS 2012 Retail Meat Report can be found at: http://www.fda.gov/downloads/AnimalVeterinary/SafetyHealth/AntimicrobialResistance/NationalAntimicrobialResistanceMonitoringSystem/UCM442212.pdf
[48] The NARMS 2013 Retail Meat Interim Report can be found at: http://www.fda.gov/downloads/AnimalVeterinary/SafetyHealth/AntimicrobialResistance/NationalAntimicrobialResistanceMonitoringSystem/UCM442215.pdf

enabling the scientific community to contribute ideas and expertise about combating antibiotic-resistant bacteria. FDA also published the 2012-2013 NARMS Integrated Annual Report for the first time in August 2015, replacing the NARMS Executive Summary Report and highlighting antimicrobial resistance patterns in bacteria isolated from humans, retail meats, and animals at slaughter. Through an interagency agreement with FDA, the USDA's Food Safety Inspection Service (FSIS) implemented a greatly improved food animal sampling scheme for federally inspected slaughter houses that is designed to generate a more representative data set for the purposes of NARMS. FDA also worked with the USDA's Agriculture Research Service (ARS) to develop a new consortium of ARS research centers and select universities to collect and test on-farm samples for the first time. In addition, the Animal Drugs and Feeds Program is implementing whole genome sequencing technology and supportive bioinformatics to provide definitive information on the nature, origin and spread of resistant bacteria in foods.

Research Studies related to Antibiotic Resistance and Salmonella

FDA provides scientific research solutions that ensure the safety of human and animal health. In FY 2014 and FY 2015, FDA completed several additional research studies to assess the safety of distillers' grains, which are a by-product of ethanol production and are frequently used in animal feed. Methods to measure antibiotic concentrations in distillers grains, along with techniques to assess the effect of these drugs on bacteria, will allow FDA to determine if antibiotic residues remaining from the fermentation process are present at concentrations that can lead to the development of antibiotic resistance.

In addition, the high capacity and low costs of rapid DNA sequencing technology and advances in analysis software have made it affordable and much easier to routinely determine and interpret the complete DNA sequence obtained from microorganisms. Advancements in whole genome sequencing (WGS) represent a revolution in infectious disease diagnosis and surveillance because this technique provides a complete picture of acquired traits that are present in a microorganism, such as known virulence and antibiotic resistance traits.

Further, FDA is using a technique developed at the University of Georgia to switch from traditional, labor intensive, expensive, Salmonella serotyping to rapidly identifying the most commonly occurring 200 serotypes of Salmonella from the WGS data obtained from cultured bacteria. During FY 2014 and the first half of FY 2015, FDA sequenced over 3,000 bacteria species. A subset of Salmonella species isolated in 2011-2012 from retail meats and human patients have been sequenced and the data used to evaluate the correlation between the presence of antimicrobial resistance genes and antimicrobial resistance traits that can be measured using standardized clinical microbiological methods.

Selected Guidances Issued

Below are guidances issued by the Animal Drugs and Feeds Program in 2015. These guidances help address various issues and can be further described in the attached links and narratives in this section.[49]

[49] For more information on guidance please visit http://www.fda.gov/RegulatoryInformation/Guidances/.

Date Issued	#	Title	Description
Sep 2015	FDA-2010-N-0155	Veterinary Feed Directive (VFD) Regulation Questions and Answers	Final - revised the VFD regulations in 21 CFR 558.6 and introduced clarifying changes to the definitions in 21 CFR 558.3
Sep 2015	FDA-2008-D-0165	Blue Bird Medicated Feed Labels	Final - Information about how to label medication that will be diluted with other ingredients before being given to an animal
Jun 2015	FDA-2013-D-0928	Recommendations for Preparation and Submission of Animal Food Additive Petitions	Final - Describes information that FDA recommends for inclusion in food additive petitions (FAPs) for food additives used in animal food

Compounded and Unapproved Animal Drug Products

In addition to focusing on providing timely premarket review of new animal drugs, FDA is leading the effort to aggressively combat the growing problem of compounded and unapproved animal drug products being marketed and sold.

In FY 2015, FDA expanded its Animal and Veterinary compliance and enforcement webpage to include a page dedicated to: Inspections, Recalls, and Other Actions with Respect to Firms that Engage in Animal Drug Compounding.[50] FDA has initiated the regulatory framework that will bring substandard and illegally marketed drugs into the regulatory fold, and significantly reduce the risk of harm to human and animal health.

In May 2015, FDA released a draft Guidance for Industry #230 "Compounding Animal Drugs from Bulk Substances" for public comment. Current law does not permit compounding of animal drugs from bulk drug substances, but FDA recognizes that there are limited circumstances when an animal drug compounded from bulk drug substances may be an appropriate treatment option. FDA's GFI #230 outlines specific conditions under which FDA generally does not intend to take action against state-licensed pharmacies, veterinarians, and facilities registered as outsourcing facilities when drugs are compounded for animals from bulk drug substances. FDA has received comments on the draft guidance and is taking them into consideration during preparation of final guidance.

Milk Residue Survey

In March 2015, FDA released results from its milk sampling survey,[51] involving the testing of nearly 2,000 dairy farms for drug residues in milk. More than 99 percent of the samples were free of drug residues of concern, underscoring the safety of the U. S. milk supply. These findings provide evidence that the nation's milk safety system is effective in helping to prevent

[50] The webpage can be accessed at: http://www.fda.gov/AnimalVeterinary/GuidanceComplianceEnforcement/ComplianceEnforcement/UnapprovedAnimalDrugs/ucm417562.htm
[51] The Milk Sampling Survey can be found at: http://www.fda.gov/downloads/AnimalVeterinary/GuidanceComplianceEnforcement/ComplianceEnforcement/UCM435759.pdf

drug residues of concern in milk, even in those limited instances when medications are needed to maintain the health of dairy cattle.

Adverse Drug Review
The Animal Drugs and Feeds Program receives approximately 91,500 Adverse Drug Experience (ADE) reports annually and is the largest animal drug ADE database in the world, with over 620,000 cases. Over the past few years, the Animal Drugs and Feeds Program eliminated the paper submission backlog and made substantial improvements to the electronic portal, allowing for almost 98 percent of reports to be submitted electronically. This database provides the ability to analyze data for use in both premarket and postmarket animal drug evaluation. The efforts to increase the functionality, utilization, and analysis of this pharmacovigilance database have improved animal drug safety.

In December 2014, FDA issued final guidance #214 "*Pharmacovigilance of Veterinary Medicinal Products Electronic Standards for Transfer of Data*." The guidance provides recommendations to help animal drug manufacturers create a single electronic adverse event message that can be used by multiple regulatory authorities. The need for drug manufacturers and regulatory bodies to exchange and send information on a worldwide scope is essential to monitoring potential health risks and ensuring drug safety. GFI #214 supports the FDA's work with the VICH, an international program aimed at harmonizing technical requirements for veterinary product regulation. The guidance is the FDA's version of VICH Guideline (GL) 35 and provides a standardized format to allow for electronic exchange of information between stakeholders.

PREDICT
Since FDA's completion of the full national rollout of Entry Review and the Predictive Risk-based Evaluation for Dynamic Import Compliance Targeting (PREDICT) to all 16 import districts, FDA has improved the rules that support a risk-based approach to import screening. PREDICT allows FDA to make efficient and accurate admissibility decisions and allows FDA field office staff to target the examination of higher risk imported products. Thus, PREDICT enhances the prevention for entry of adulterated, misbranded, or otherwise violative goods and expedites the entry of non-violative goods.

Vet-LIRN
The Animal Drugs and Feeds Program offers grant funds to bolster efforts to validate testing methods as part of the Veterinary Laboratory Investigation and Response Network (Vet-LIRN). Vet-LIRN is a network of state and university laboratories that receive funding from FDA to increase testing capabilities and assist FDA with investigations into potential problems with animal feeds, including pet foods, and animal drugs.

FDA has been actively investigating the cause of illnesses reported in pets which may be associated with the consumption of pet jerky treat products In FY 2015, FDA continued to work on pet illnesses related to jerky-type pet treats. Hundreds of samples were collected and analyzed, but no disease-causing contaminants were identified. FDA continues to perform inspections and collect samples both domestically and internationally, conduct tests on pet jerky treat products, and follow up on consumer complaints.

Enforcement Strategies
The Animal Drugs and Feeds Program protects human and animal health by developing and implementing appropriate enforcement strategies, such as inspections, to ensure the compliance

of marketed products. Through the establishment of a High Risk Working Group (HRWG) in FY 2012, FDA identified and addressed policy and process changes required for the implementation of a high risk (HR) inspection program for food and feeds. These HR inspections are targeted on a three year cycle. This information, along with data included in the cycle beginning in FY 2014, assisted with more targeted inspections in FY 2015.

When firms violate the FDA requirements of the FD&C Act, FDA takes regulatory action and assists the firms in reaching full compliance while ensuring that products of concern do not reach U.S. consumers. When firms refuse to comply with FDA regulations, FDA takes further enforcement action to ensure unsafe products do not reach U.S. consumers and requests the firm's potential shut down of operations. FDA issued 118 warning letters in FY 2015 as a result of field recommendations for regulatory action based on violative inspection findings. FDA also monitors recalls of veterinary products and feed and ensures the effectiveness of the firm's recall to remove the defective product from commerce. In FY 2015, FDA classified 9 Class I (most serious), 18 Class II, and 11 Class III recalls of regulated animal products.

Food Additive Petition

FDA reviews and approves food additive petitions, establishes standards for feed contaminants, and directs FDA's medicated feed and pet food programs. FDA monitors the safety and usefulness of food additives to ensure the health and safety of livestock, poultry, fish, and pets. FDA works with stakeholders to promote responsibility through the identification, development, and implementation of new regulations and guidance to further support the production of safe food for animals.

FDA is committed to moving to an all-electronic work environment to support CVM's business processes. CVM is leveraging its pre-market Electronic Document Submission and Review (EDSR) system for pre-market Food Additive Petitions and Investigational Food Additive files.

Nanotechnology

The Animal Drugs and Feeds Program is an integral partner in FDA's regulation of nanotechnology products. Nanotechnology is an emerging technology that allows scientists to create, explore, and manipulate materials on a scale measured in nanometers – billionths of a meter or particles so small that they cannot be seen with a regular microscope. Such materials can have chemical, physical, and biological properties that differ from those of their larger counterparts.

In August 2015, FDA issued final Guidance for Industry #220 "Use of Nanomaterials in Food for Animal" addressing the use of nanotechnology in food for animals. This guidance addresses the legal framework for ingredients in food for animals and includes recommendations for submitting a Food Additive Petition (FAP) for a nanomaterial animal food ingredient.

FUNDING HISTORY

Fiscal Year	Program Level	Budget Authority	User Fees
FY 2013 Actual	$147,774,000	$125,841,000	$21,933,000
FY 2014 Actual	$164,313,000	$141,566,000	$22,747,000
FY 2015 Actual	$175,024,000	$147,564,000	$27,460,000
FY 2016 Enacted	$188,632,000	$158,652,000	$29,980,000
FY 2017 President's Budget	$196,736,000	$161,852,000	$34,884,000

BUDGET REQUEST

The FY 2017 Budget Request is $196,736,000, of which $161,852,000 is budget authority and $34,884,000 is user fees. The budget authority increases by $3,200,000 compared to the FY 2016 Enacted level and user fees increase by $4,904,000. The FY 2017 Budget allows the Animal Drugs and Feed Program to improve and safeguard access and enhance oversight of animal drugs, devices, and feed.

The FY 2017 Budget allows the Animal Drugs and Feeds Program to meet its mission to protect human and animal health by increasing the availability and diversity of safe and effective products that relieve animal pain and suffering, sustain their health, and do not compromise human health. The activities of greatest public health importance are prioritized to maintain support for FDA core mission goals, to enhance oversight of FDA-regulated products and improve access to FDA-regulated products that benefit human and animal health. These activities include:

- monitoring the safety of animal devices and the safety and effectiveness of animal drugs on the market
- approval of marketed animal drug products
- approving feed additives
- ensuring food for animals is safe.

The Animal Drugs and Feeds Program will approve safe and effective products for animals in the pre-approval process, and provide grants to support minor use and minor species (MUMS) drug approval or conditional approval as part of the MUMS Animal Health Act of 2004. The requested increase enables the Animal Drugs and Feeds Program to meet statutory requirements for user fee collections under the Animal Drug User Fee Act (ADUFA) and the Animal Generic Drug User Fee Act (AGDUFA). These user fees supplement the appropriated portion of the new animal drug review program while enabling the Animal Drugs and Feeds Program to retain user fee supported staff. With these user fees, the Program will continue to improve the quality and timeliness of the pioneer animal drug and generic new animal drug review processes. FDA will also conduct preapproval inspections in support of the animal drug review process.

In addition, the Animal Drugs and Feeds Program will continue important postmarket efforts to protect human and animal health. These efforts include reviewing Adverse Drug Experience reports which provide the ability to data mine, an important tool to analyze data in real time in large complex databases with the goal of discovering unexpected occurrences of adverse event signals, for use in both pre and postmarket approval animal drug work. The program will

investigate pet illnesses and will enforce compliance actions in support of ensuring safe and effective products. The Animal Drugs and Feeds Program will continue efforts to reduce the availability of illegally marketed unapproved animal drugs, including compounded animal drugs.

The Food Safety Modernization Act (FSMA) will be implemented by creating a modern, prevention-focused, science- and risk-based food and feed safety system. In addition, field inspections, investigations, and enforcement activities will be conducted to ensure the adherence of laws to protect and advance human and animal health.

The Animal Drugs and Feeds Program will continue to address the source and magnitude of antimicrobial resistance with the release of final Guidance for Industry (GFI) #213 on removing production claims for medically important antimicrobials and the final rule revising the Veterinary Feed Directive (VFD), which brings remaining therapeutic claims for these products under veterinary oversight. This work supports the Presidential initiative Combating Antibiotic Resistant Bacteria (CARB) to improve the safety and quality of a significant portion of the medical products available in the U. S. In addition, the National Antimicrobial Resistance Monitoring System (NARMS) will be utilized to monitor antimicrobial resistance among enteric (intestinal) bacteria.

These activities in the FY 2017 Budget Request support mission critical program activities and Presidential, HHS, and FDA human and animal health priorities.

BUDGET AUTHORITY

Medical Product Safety and Availability: $36.5 million (+$3.2 million)

Combating Antibiotic Resistant Bacteria: +$1.0 million
Center: +$1.0 million

Antibiotics are important in combating infectious diseases in humans and animals. Antibiotic resistance, the ability of bacteria to evade or resist antibiotics, is a growing public health threat. *The National Action Plan for Combating Antibiotic-Resistant Bacteria*, issued by the White House in March 2015, is intended to guide the activities of the U.S. Government as well as guide action by public health, healthcare, and veterinary partners in a common effort to address urgent and serious drug-resistant threats. This effort supports the continued work to address public health safety concerns associated with antimicrobial drug use in animals and to better protect antibiotic effectiveness for both human and animal populations.

With increased funding, FDA will work in collaboration with USDA to support efforts to monitor antimicrobial drug use in food-producing animals through the periodic collection of nationally representative on-farm data on antimicrobial-use practices and resistance. FDA will also coordinate with USDA to develop a U.S. Government annual assessment report, including identification of key outcome measures.

Supporting Animal Drug Review: +$2.2 million
Center: +$2.2 million

The Animal Drug Review Program for pioneer animal drugs is an important FDA program, supporting both human and animal health. The program strives to meet performance goals for statutory review timeframes, which has allowed pioneer animal drugs to advance to market faster and ensure the availability of animal drug products that are safe and effective for animals as well as for the public with respect to animals intended for food consumption. The increased funding

requested will enable FDA to continue to meet premarket animal drug review requirements by having the necessary review staff to carry out these activities.

USER FEES

Current Law User Fees: +$0.73 million

Center: +$0.71 million / Field: +$0.02 million

The Animal Drugs and Feeds Program request includes an increase of $0.73 million for current law user fees, which will allow FDA to fulfill its mission of protecting human and animal health and accelerating innovation in the industry.

Proposed User Fees: +$4.2 million

Proposed Food Import Fee: +$1.5 million
Center: +$1.5 million

One of the most transformative aspects of FSMA is the new set of import authorities and mandate to FDA to create a modern, prevention-oriented import oversight system that can meet the challenges of the global food system, with its complex supply chains and increasing volume of imports. FSMA provisions create new obligations for food and feed importers to have a risk-based foreign supplier verification program in place to ensure that their suppliers produce human food and animal food in compliance with processes and procedures that offer the same level of protection as FDA's preventive controls requirements and produce safety standards, and is not otherwise adulterated or misbranded with respect to food allergen labeling.

The Animal Drugs and Feeds Program will conduct the following activities with this user fee:

- Establish new systems to prevent the import of unsafe animal food
- Develop program to support voluntary qualified importer program and third party accreditation rule
- Develop the International Comparability Assessment Tool (ICAT) for animal feed to evaluate the feed safety systems of foreign countries.

Proposed Food Facility Registration and Inspection Fee: +$2.7 million
Center: $1.6 million / Field: +$1.1 million

Revenue from the proposed Food Facility and Registration Fee would enable FDA to fully modernize the FDA inspection program through the further development and implementation of new inspection models and tools. This includes training of FDA inspectors and compliance staff and their state counterparts in the new models and information technology to improve targeting and risk-based efficiency of inspection.

In addition, this user fee will allow FDA to implement preventive controls in animal food processing facilities through the support, implementation, and enforcement of preventive controls in animal food processing facilities. FDA will be able to communicate and share information regarding food facility inventory with our state regulatory partners which is a necessary component to advance FDA's workplanning process with state agencies to ensure FDA meets the FSMA inspection frequency mandate. FDA will be able to advance development of new inspection tools, such as the Observation and Corrective Action Reporting (OCAR) system. FDA will continue to assist the states in the implementation of the Animal Feed

Regulatory Program Standards (AFRPS) and in their development and implementation of operational plans for animal food preventive controls.

PERFORMANCE

The Animal Drugs and Feeds Program's performance measures focus on premarket animal drug application review, high risk inspections including BSE, warning letter review, and lab coordination for detection and response, as detailed in the following table.

Measure	Year and Most Recent Result / Target for Recent Result (Summary of Result)	FY 2016 Target	FY 2017 Target	FY 2017 +/- FY 2016
243201: Complete review and action on original New Animal Drug Applications (NADAs) and reactivations of such applications received during the fiscal year. *(Output)*	FY 2014: 98.3% w/in 180 days Target: 90% w/in 180 days (Target Exceeded)	90% w/in 180 days	90% w/in 180 days	maintain
243202: Complete review and action on Non-administrative original Abbreviated New Animal Drug Applications (ANADAs) and reactivations of such applications received during the fiscal year. *(Output)*	FY 2014: 100% w/in 270 days Target: 90% w/in 270 days (Target Exceeded)	90% w/in 270 days	90% w/in 270 days	maintain
244202: Number of domestic and foreign high-risk animal drug and feed inspections. *(Output)*	FY 2015: 303 Target: 250 (Target Exceeded)	250	250	maintain
244203: Cover 100% of targeted prohibited material BSE actual inventory. *(Output)*	FY 2015: 100% Target: 100% (Target Met)	100%	100%	maintain
244204: Complete review and action on warning letters received within 15 working days to better safeguard our food supply by alerting firms to identified deviations in order to become compliant. *(Output)*	FY 2015: 71% w/in 15 working days Target: 60% w/in 15 working days (Target Exceeded)	50% w/in 15 working days	50% w/in 15 working days	maintain

Measure	Year and Most Recent Result / Target for Recent Result (Summary of Result)	FY 2016 Target	FY 2017 Target	FY 2017 +/- FY 2016
244301: Total number of collaborating laboratories that will provide coordinated response to high priority chemical and microbial animal feed including pet food contamination events. *(Outcome)*	FY 2015: 36 Target: 26 (Target Exceeded)	36	36	maintain

The following selected items highlight notable results and trends detailed in the performance table.

New Animal Drug Application Review
CVM exceeded ADUFA performance goals, except for one submission, in ten out of eleven years. Additionally, CVM exceeded AGDUFA performance goals, except for one submission, in five out of six years. CVM completed review and action on 98.3 percent of original NADAs as well as other ADUFA sentinel submissions within the timeframes specified during FY 2014. CVM also completed review and action on 100 percent of original ANADAs as well as other AGDUFA sentinel submissions within the time frames specified in FY 2014.

Warning Letters
FDA monitors marketed animal drugs, food additives, and veterinary devices to assure their safety and effectiveness. Warning Letters are issued when medicated feed manufacturers are found to be in violation of acceptable manufacturing processes. Violators are encouraged to take prompt action to correct violations; otherwise FDA may take additional regulatory action without further notice, including seizure of products and/or injunction. The resources required to review each warning letter may vary greatly, depending on the subject matter and evidence, and some warning letters require additional input and clearance and time to process. Nevertheless, CVM reviewed and acted on 7% more warning letters within 15 days than the previous fiscal year and exceeded the target by 11%. The FY 2016 and FY 2017 targets will decrease to 50% due to the additional effort needed to implement important provisions of the Food Safety Modernization Act (FSMA) and the newly rewritten Veterinary Feed Directive (VFD).

Conduct Highest Risk BSE Inspections
Since establishing this performance goal, the aim has been to inspect 100% of the licensed and unlicensed feed mills, renderers and protein blenders that make or use prohibited materials in their feed manufacturing operation. However, the total inventory of these firms has been dropping for several years as firms are either combined through mergers or just stop using prohibited materials. ORA will continue to cover 100% of the targeted prohibited BSE inventory, even though we estimate a reduction of 35% of the BSE inventory over the next few years.

PROGRAM ACTIVITY DATA

Animal Drugs & Feeds Program Activity Data (PAD)

CVM Workload and Outputs	FY 2015 Actual	FY 2016 Estimate	FY 2017 Estimate
New Animal Drug Applications (NADAs) [1]			
Received	12	18	20
Completed	10	16	18
Approved	8	13	16
Pending [2]	3	5	7
New Animal Drug Application Supplements [1, 3]			
Received	514	1,000	1,000
Completed	516	500	500
Approved	407	400	400
Pending [2]	116	616	1,116
Abbreviated New Animal Drug Applications (ANADAs) [1]			
Received	25	70	70
Completed	32	32	32
Approved	20	20	20
Pending [2]	10	48	86
Abbreviated New Animal Drug Application Supplements [1, 3]			
Received	227	500	500
Completed	225	225	225
Approved	166	160	160
Pending [2]	116	391	666
Investigational New Animal Drug (INAD) Files [4]			
Received	3,734	4,000	4,000
Completed	3,805	3,800	3,800
Pending [2]	335	535	735
Generic Investigational New Animal Drug (JINAD) Files [4]			
Received	354	750	750
Completed	358	450	450
Pending [2]	78	378	678
Food (Animal) Additive Petitions Completed	81	80	80
Investigational Food Additive Petitions Completed	120	130	130
Adverse Drug Event (ADE) [5]			
ADE Reports Received	91,592	90,000	90,000
Post-Approval ADE Data Reviews	135	100	100

[1] Includes originals applications and reactivations. If the application is not approvable, the sponsor may submit additional information until FDA is able to approve the application.

[2] Reflects submissions received during the fiscal year that still require review.

[3] A supplemental application is a sponsor request to change the conditions of the existing approval. Supplemental applications can be significant (such as a new species or indication), or routine (such as product manufacturing changes). The estimates do not include invited labeling change supplement applications because it is not possible to accurately project sponsor or CVM requests for this type of application.

[4] An INAD or JINAD file is established at the request of the sponsor to archive all sponsor submissions for a phased drug review including requests for interstate shipment of an unapproved drug for study, protocls, technical sections, data sets, meeting requests, memos of conference, and other information.

[5] This measure tracks the number of "Post-approval ADE data reviews" completed each fiscal year. A Post-approval ADE Data Review is a comprehensive report by product of multiple ADE reports (in some cases this could be hundreds or thousands of individual reports).

Field Animal Drugs & Feeds Program Activity Data (PAD)

Field Animal Drugs and Feeds Program Workload and Outputs	FY 2015 Actuals			FY 2016 Estimate			FY 2017 Estimate		
	Total	Animal Drugs	Feeds	Total	Animal Drugs	Feeds	Total	Animal Drugs	Feeds
FDA WORK									
DOMESTIC INSPECTIONS									
UNIQUE COUNT OF FDA DOMESTIC ANIMAL DRUGS AND FEEDS ESTABLISHMENT INSPECTIONS	***1,565***	***226***	***1,356***	***1,565***	***299***	***1,524***	***1,565***	***299***	***1,524***
Pre-Approval /BIMO Inspections	39	39	0	79	79	0	79	79	0
Drug Process and New ADF Program Inspections	189	189	0	222	222	0	222	222	0
BSE Inspections	1,163	0	1,163	1,205	0	1,205	1,205	0	1,205
Feed Contaminant Inspections	24	0	24	25	0	25	25	0	25
Illegal Residue Program Inspections	424	0	424	473	0	473	473	0	473
Feed Manufacturing Program Inspections	178	0	178	141	0	141	141	0	141
Domestic Laboratory Samples Analyzed	1,650	4	1,646	2,458	26	2,432	2,458	26	2,432
FOREIGN INSPECTIONS									
UNIQUE COUNT OF FDA FOREIGN ANIMAL DRUGS AND FEEDS ESTABLISHMENT INSPECTIONS [1]	***98***	***83***	***15***	***75***	***69***	***6***	***75***	***69***	***6***
Foreign Pre-Approval/Bioresearch Monitoring Program Inspections	35	35	0	45	45	0	45	45	0
Foreign Drug Processing and New ADF Program Inspections	70	70	0	33	33	0	33	33	0
Foreign Feed Inspections	8	0	8	7	0	7	7	0	7
BSE Inspections	10	0	10	0	0	0	0	0	0
TOTAL UNIQUE COUNT OF FDA ANIMAL DRUGS AND FEEDS ESTABLISHMENT INSPECTIONS	***1,663***	***309***	***1,371***	***1,640***	***368***	***1,530***	***1,640***	***368***	***1,530***
IMPORTS									
Import Field Exams/Tests	7,311	1,708	5,603	3,600	185	3,415	3,600	185	3,415
Import Laboratory Samples Analyzed	931	1	930	750	2	748	750	2	748
Import Physical Exam Subtotal	**8,242**	**1,709**	**6,533**	**4,350**	**187**	**4,163**	**4,350**	**187**	**4,163**
Import Line Decisions	416,860			446,903			479,111		
Percent of Import Lines Physically Examined	1.98%			0.97%			0.91%		
STATE WORK									
UNIQUE COUNT OF STATE CONTRACT ANIMAL FEEDS ESTABLISHMENT INSPECTIONS	***4,426***	***0***	***4,426***	***5,045***	***0***	***5,045***	***5,045***	***0***	***5,045***
UNIQUE COUNT OF STATE PARTNERSHIPS ANIMAL FEEDS ESTABLISHMENT INSPECTIONS [2]	***6***	***0***	***6***	***0***	***0***	***0***	***0***	***0***	***0***
UNIQUE COUNT OF STATE COOPERATIVE AGREEMENT ANIMAL FEEDS ESTABLISHMENT INSPECTIONS [3]	***306***	***0***	***306***	***0***	***0***	***0***	***0***	***0***	***0***
State Contract Inspections: BSE	4,105	0	4,105	5,000	0	5,000	5,000	0	5,000
State Contract Inspections: Feed Manufacturers	741	0	741	320	0	320	320	0	320
State Contract Inspections: Illegal Tissue Residue	276	0	276	412	0	412	412	0	412
State Partnership Inspections: BSE and Other	6	0	6	0	0	0	0	0	0
State Cooperative Agreement BSE Inspections	306	0	306	0	0	0	0	0	0
State Contract Animal Drugs/Feeds Funding	$2,917,129	0	$2,917,129	$3,004,643	0	$3,004,643	$3,094,782	0	$3,094,782
BSE Cooperative Agreement Funding	$0	0	$0	$0	0	$0	$0	0	$0
State Contract Tissue Residue Funding	$469,072	0	$469,072	$483,144	0	$483,144	$497,638	0	$497,638
Total State Funding	**$3,386,201**	**$0**	**$3,386,201**	**$3,487,787**	**$0**	**$3,487,787**	**$3,592,420**	**$0**	**$3,592,420**
GRAND TOTAL ANIMAL DRUGS AND FEEDS ESTABLISHMENT INSPECTIONS	***6,401***	***309***	***6,109***	***6,685***	***368***	***6,575***	***6,685***	***368***	***6,575***

[1] The FY 2015 actual unique count of foreign inspections includes 7 OIP inspections (7 for China).

[2] The State inspections that are funded by the FDA are now being obligated via formal contract funding vehicles and this number is expected to decrease in the future until there are no planned State Partnership inspections.

[3] The State cooperative agreement BSE inspections that are funded by the FDA are now being obligated via formal contract funding vehicles and this number along with the funding for these inspections are expected to decrease in the future until there are no planned State Cooperative Agreement BSE inspections.

DEVICES AND RADIOLOGICAL HEALTH

(Dollars in Thousands)	FY 2015 Final	FY 2015 Actuals	FY 2016 Enacted	FY 2017 President's Budget	FY 2017 +/- FY 2016
Devices and Radiological Health	**440,010**	**442,689**	**450,304**	**463,402**	**13,098**
Budget Authority	***320,825***	***320,793***	***323,253***	***325,764***	***2,511***
User Fees	***119,185***	***121,896***	***127,051***	***137,638***	***10,587***
Center	344,278	350,180	352,048	360,836	8,788
Budget Authority	240,345	240,318	240,808	243,319	2,511
User Fees	103,933	109,862	111,240	117,517	6,277
Medical Device (MDUFA)	*97,810*	*104,569*	*104,991*	*111,140*	6,149
Mammography Quality Standards Act (MQSA)	*6,123*	*5,293*	*6,249*	*6,377*	128
Field	95,732	92,509	98,256	102,566	4,310
Budget Authority	80,480	80,475	82,445	82,445	---
User Fees	15,252	12,034	15,811	20,121	4,310
Medical Device (MDUFA)	*1,913*	*1,949*	*2,199*	*2,328*	129
Mammography Quality Standards Act (MQSA)	*13,339*	*10,085*	*13,612*	*13,892*	280
International Courier	---	---	---	*3,901*	3,901
FTE	**2,087**	**2,190**	**2,117**	**2,166**	**49**

Authorizing Legislation: Federal Food, Drug, and Cosmetic Act (21 U.S.C. 321-399); Radiation Control for Health & Safety Act (21 U.S.C. 360hh-360ss); Medical Device Amendments of 1976; Clinical Laboratory Improvement Amendments of 1988 (42 U.S.C. 201); Safe Medical Devices Act of 1990; Mammography Quality Standards Act of 1992 (42 U.S.C. 263b); Medical Device Amendments of 1992; Food and Drug Administration Modernization Act; Medical Device User Fee and Modernization Act of 2002; Project Bioshield Act of 2004 (21 U.S.C. 360bbb-3); Medical Device User Fee Stabilization Act of 2005; Food and Drug Administration Amendments Act of 2007 (FDAAA); Patient Protection and Affordable Care Act, 2010; FDA Safety and Innovation Act (FDASIA), 2012

Allocation Methods: Direct Federal/Intramural

PROGRAM DESCRIPTION AND ACCOMPLISHMENTS

The Devices and Radiological Health Program (the Devices Program) began in 1976 with the passage of the Medical Device Amendments (MDA) to the Food, Drug, and Cosmetic Act. The Devices Program operates with appropriations and user fees and is comprised of the Center for Devices and Radiological Health and the Office of Regulatory Affairs.

The Devices Program is responsible for the national regulation of all medical devices, from simple articles such as tongue depressors to complex robotic equipment for surgery and cutting-edge diagnostic products such as implantable defibrillators. To protect the public from unnecessary exposure to radiation, the Devices Program also regulates radiation-emitting products that include microwave ovens, X-ray equipment, and medical ultrasound and MRI machines. In addition, the Devices Program monitors mammography facilities to make sure the equipment is safe and properly run.

The mission of the Devices Program is to protect and promote the public health. FDA assures that patients and providers have timely and continued access to safe, effective, and high-quality medical devices and safe radiation-emitting products. FDA provides consumers, patients, their caregivers, and providers with understandable and accessible science-based information about the products it oversees. FDA facilitates medical device innovation by advancing regulatory

science, providing industry with predictable, consistent, transparent, and efficient regulatory pathways, and by assuring consumer confidence in devices marketed in the United States.

The vision of the Devices Program is to ensure that patients in the United States have access to high-quality, safe, and effective medical devices of public health importance – first in the world. The United States is the world's leader in regulatory science, medical device innovation and manufacturing, and radiation-emitting product safety. U.S. postmarket surveillance quickly identifies poorly performing devices, accurately characterizes real-world performance, and facilitates device approval or clearance. Devices are legally marketed in the United States and remain safe, effective, and of high-quality. Consumers, patients, their caregivers, and providers have access to understandable science-based information about medical devices and use this information to make health care decisions.

The following strategic priorities describe the most important areas that the Devices Program will focus on to reach this vision. These priorities are to:

- establish a National Evaluation System for Medical Devices
- partner with Patients
- promote a Culture of Quality and Organizational Excellence.

By addressing these priorities, the Devices Program aims to help medical device developers choose the United States as the country of first choice for their innovative new technologies – a key contributor to early patient access to high quality, safe and effective devices. Providing excellent customer service will also improve interactions with stakeholders and colleagues, both internal and external, support better regulatory outcomes, and improve patient health.

Recent accomplishments of the Devices Program include the following:

- reduced the number of Investigation Device Exemptions (IDEs) requiring more than two cycles to full approval by 53 percent from FY 2013 to FY 2015
- decreased review times for investigational device exemption (IDE) submissions, from a median time of 101 days in FY 2014 to 30 days in FY 2015
- increased the number of Early Feasibility Studies (EFS) approved by over 100 percent from FY 2014 to FY 2015
- achieved an 88 percent Customer Satisfaction Rating by June 30, 2015.

The following selected accomplishments demonstrate the Devices Program's delivery of its regulatory and public health responsibilities within the context of current FDA strategic goals and priorities.[52]

Improve and Safeguard Access

The Devices Program is committed to flexible, smart regulation, and to working with industry and the clinical community to ensure that innovative new medical devices that demonstrate a reasonable assurance of safety and effectiveness are available for U.S. patients. Each year, the Devices Program evaluates the safety and effectiveness of new devices and approves or clears thousands of products for market. As a result, millions of U.S. patients benefit from innovative medical devices that reduce suffering, treat previously untreatable conditions, extend lives, and improve public health.

This is a time of remarkable advances in medical device technology, advances that can extend lives, and minimize suffering for American patients. New technologies hold out promise for empowering patients in their own health care decision-making and for delivering precision treatments that are truly targeted to individuals. At the same time, the promise of advances in medical technology will only be realized if the patients and providers who use them are confident that they are safe and can do what they are intended to do.

The Devices Program has evolved alongside changes in medical technology and in the global marketplace. The Devices Program has implemented several new policies and programmatic improvements to ensure American patients have timely access to devices without compromising standards of safety and effectiveness. Devices are coming to market more quickly, and more products that go through The Devices Program's premarket process are being approved and cleared for marketing. In addition, FDA has made its review of investigational devices more efficient and expeditious, streamlining the pathway to conducting clinical investigations in the United States.

Among the FDA strategic goals and priorities, the Devices Program supports FDA's Smart Regulation, Regulatory Science, and Safety and Quality priorities through efforts including the Clinical Trial Enterprise, Early Feasibility Studies, and the Medical Device Innovation Consortium.

Guidances

Below are selected guidances issued by the Devices Program during calendar year 2015. These guidances help address various issues.[53]

Date	#	Title	Description
Jul 2015	FDA-2015-D-2148	Submission of Premarket Notifications for Magnetic Resonance Diagnostic Devices	This draft guidance provides a description of the information that should be included in a premarket notification (510(k)) submission for a magnetic resonance diagnostic device.

[52] Please visit FDA.gov for additional program information and detailed news items.
[53] For more information on guidance please visit http://www.fda.gov/RegulatoryInformation/Guidances/.

Date	#	Title	Description
Apr 2015	FDA-2014-D-0090	Balancing Premarket and Postmarket Data Collection for Devices Subject to Premarket Approval	This final guidance clarifies FDA's current policy on balancing premarket and postmarket data collection during the Agency's review of premarket approval (PMA) applications
Apr 2015	FDA-2014-D-0363	Expedited Access for Premarket Approval and De Novo Medical Devices Intended for Unmet Medical Need for Life Threatening or Irreversibly Debilitating Diseases or Conditions	This final guidance outlines the new, voluntary Expedited Access for Premarket Approval and De Novo Medical Devices (Expedited Access Pathway or EAP) program
May 2015	FDA-2015-D-1439	Adaptive Design for Medical Device Studies	The purpose of this draft guidance is to provide information on how to plan adaptive designs for clinical studies for medical device development programs

Product Approvals

Below are examples of selected Devices Program product approvals that occurred during calendar year 2015. This list does not represent any degree of importance or priority ranking of products.[54]

Date	Product Name	Description
Jul 2015	Osseoanchored Prostheses for the Rehabilitation of Amputees (OPRA)	The device is the first prosthesis for rehabilitation of above-the-knee amputations for adults who have rehabilitation problems with, or cannot use, a conventional leg prosthesis.
Jun 2015	Brio Deep Brain Stimulation System	An implantable, rechargeable device designed to deliver low-intensity electrical pulses to specific targets within the brain in various combinations of amplitude, pulse width, and frequency
May 2015	Nevro Senza Spinal Cord Stimulation System	A SCS System indicated as an aid in the management of chronic intractable pain of the trunk and/or limbs, including unilateral or bilateral pain associated with failed back surgery syndrome, intractable low back pain, and leg pain
Apr 2015	Gastric Emptying Breath Test	Non-invasive breath test diagnoses delayed gastric emptying – dgastroparesis – disorder that slows or stops the movement of food from the stomach to small intestine
Mar 2015	Abiomed Impella 2.5 System	A medical device that helps the heart pump blood during a high risk percutaneous coronary intervention procedure to restore blood flow to the heart

[54] For more information on product approvals and designations visit http://www.fda.gov/NewsEvents/ProductsApprovals/.

Clinical Trial Enterprise

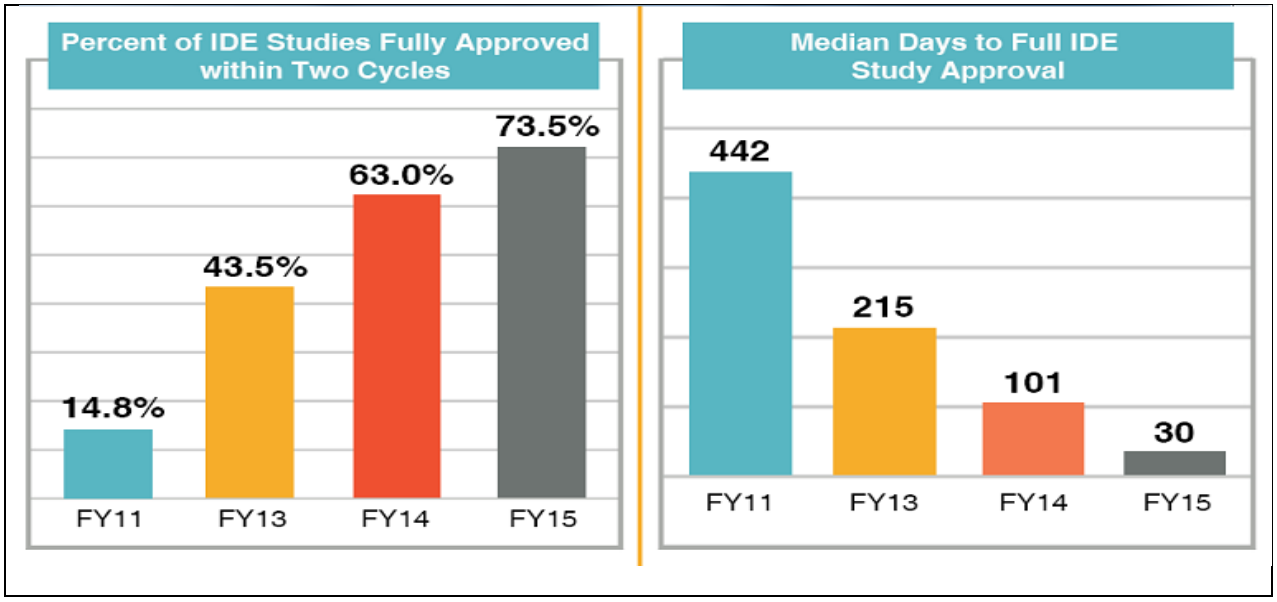
The Devices Program is committed to improving U.S. patient access to new devices by strengthening and streamlining the clinical trial enterprise. As part of our 2014-2015 Strategic Priorities, CDRH committed to reducing the time and cost of regulatory and non-regulatory aspects of the U.S. clinical trial enterprise, while assuring the protection of human subjects and the generation of robust data.

In 2015, CDRH continued to advance our clinical trials program with publication of a new draft guidance document related to how we consider benefits and risks for Investigational Device Exemptions (IDEs) decisions as well as issued a draft guidance that, when final, will encourage the use of adaptive designs for clinical trials and we are considering additional process improvements. CDRH also trained our review staff on the practical challenges related to conducting a successful trial, which included more than 100 review staff visits to sponsors of clinical trials to better understand the context and challenges of initiating and conducting clinical trials in the United States.

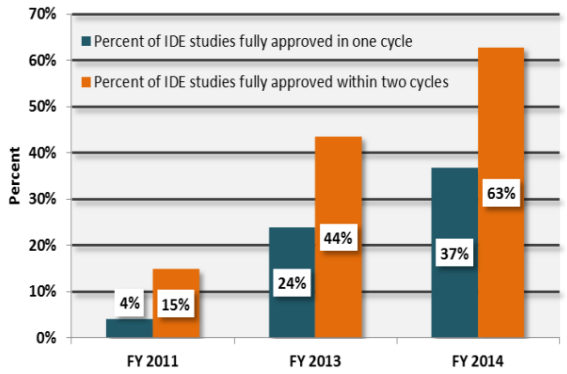
These program improvements have greatly shortened the time for an IDE to reach full FDA approval, allowing medical device clinical trials to begin sooner in the United States. As a result of these efforts:

- from FY 2011 to FY 2014, the median number of days to full IDE approval decreased from 442 days to 101 days
- during FY 2015, the median number of days to full IDE approval decreased to approximately 30 days.

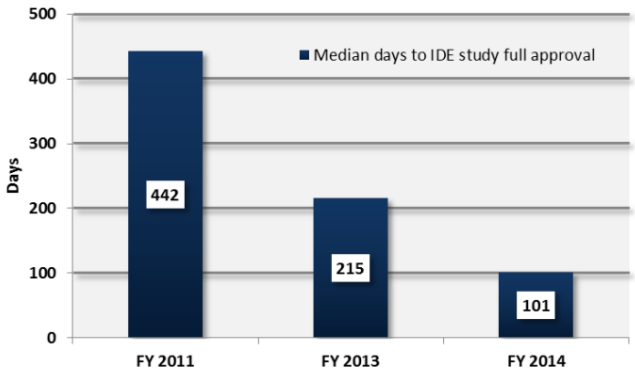
In addition, full approval now entails fewer review cycles. In FY 2011, only 15% of IDEs were approved within two review cycles. By FY 2015, approximately 74% of IDEs were approved in two review cycles. This performance meets FDA's strategic goals and, more importantly, means that important technologies have the potential to reach US patients sooner. Making it easier to start clinical studies in the United States, while assuring patient protections, can result in device makers choosing to bring their innovate technologies and treatments to U.S. patients first in the world.



Percentage of IDE studies fully approved.



Median number of days to full IDE approval.



Early Feasibility Studies

Early Feasibility Studies (EFS) are small clinical studies designed to gain early insights into an innovative technology during the development process before starting a larger clinical trial. EFS often are a critical step in device innovation, but they are frequently conducted in other countries rather than in the U.S. Device developers tend to conduct subsequent feasibility and pivotal clinical studies and then bring their products to market earlier in those countries, where they conducted an EFS to leverage clinicians who have gained experience with their technologies.

As part of our 2014-2015 Strategic Priority to Strengthen the Clinical Trials Enterprise, CDRH established a goal of increasing the number of EFS IDEs submitted to each review division in the Center. Interest in our EFS program has grown substantially, with a 50% increase in the number of EFS submissions during the first nine months of 2015, compared with the same period in 2013. In addition, six of our seven Office of Device Evaluation (ODE) review divisions reported an increase in the number of EFS submissions for 2015 compared with 2013. The Devices Program believe these results are clear evidence that we are moving the right direction, helping to ensure that robust and efficient clinical trials that provide appropriate human subject protections take place here in the United States. [55]

Expedited Access Program

On April 15, 2015, the Devices Program launched the Expedited Access Program (EAP) to speed qualifying devices to patients. Specifically, EAP is a voluntary program for certain medical devices that demonstrate the potential to address unmet medical needs for life threatening or irreversibly debilitating diseases or conditions that are subject to PMA or are eligible for *de novo* requests.

Under this pathway program, FDA provides earlier and more interactive engagement with sponsors of devices. This engagement includes the involvement of senior management and the development of a collaborative plan for collecting the scientific and clinical data to support approval – features that, taken together, will provide patients with earlier access to safe and effective medical devices. The program targets devices with potentially high impact on patient health because, for example, they fulfill an unmet need by offering an important advantage over existing devices. To promote earlier patient access, some data collection for devices marketed

[55] Available at http://www.fda.gov/downloads/medicaldevices/deviceregulationand%20guidance/guidancedocuments/ucm279103.pdf

under this pathway might be moved from premarket to postmarket, provided there is still a reasonable assurance of safety and effectiveness concerning the device.

FDA believes the EAP program will reduce the time it takes to develop important new medical devices for U.S. patients with unmet medical needs, without lowering standards of safety and effectiveness.[56]

Patient Preference Initiative

The Devices Program recognizes patients are uniquely positioned to inform medical product development with firsthand experience gained from living with a disease, including their use of available therapies to treat their conditions. To strengthen patient preferences in regulatory decisions, the Devices Program established the Patient Preferences Initiative. With this initiative, the Devices Program expanded upon the current approach for capturing patient-centered perspectives in its structured benefit-risk framework, to outline a way of incorporating patients' views on benefits and risks together with those of FDA's health care professionals, scientists, and engineers during regulatory decision-making about certain medical devices.

This approach incorporates scientific, empirical evidence from different patients who, as a group, may have a range of views about the degree and types of risks associated with a medical device and how risks should be weighed against the anticipated benefits. CDRH believes that by better understanding patients' experiences, needs, and views, FDA will be able to improve the development of medical products and enhance the safe and effective use of those products.[57]

Patient Engagement Advisory Committee (PEAC)

On September 18, 2015, the Devices Program announce FDA's first-ever Patient Engagement Advisory Committee (PEAC). This body will provide advice to the FDA Commissioner on a range of complex issues relating to medical devices, the regulation of devices, and their use by patients. It will give FDA the opportunity to obtain expertise on various patient-related topics, with the goal of improving communication of benefits and risks and increasing integration of patient perspectives into the regulatory process. These data can be used in several major ways to:

- help identify the most important benefits and risks of a technology from a patient's perspective
- assess the relative importance to patients of different attributes of benefit and risk, and clarify how patients think about the tradeoffs of these benefits and risks for a given technology
- help understand how patient preferences vary across a population.

These efforts are helping to drive a more patient-centered medical product development and assessment process.[58]

Medical Device Innovation Consortium (MDIC)

Through the Medical Device Innovation Consortium (MDIC), FDA collaborates with industry, nonprofit organizations, patient organizations and other Federal agencies to find solutions for common medical device challenges. It's collaborations focus on advancing regulatory science to

[56] Available at http://www.fda.gov/downloads/MedicalDevices/DeviceRegulationandGuidance/GuidanceDocuments/UCM393978.pdf
[57] Available at http://www.fda.gov/aboutfda/centersoffices/officeofmedicalproductsandtobacco/cdrh/cdrhpatientengagement/ucm462830.htm
[58] Available at http://www.fda.gov/AboutFDA/CentersOffices/OfficeofMedicalProductsandTobacco/CDRH/CDRHPatientEngagement/ucm462829.htm

propel device development through the regulatory process and to market, resulting in smarter regulation and earlier patient access to safe, effective, and high-quality devices. This includes providing a venue for leveraging resources, people, and intellectual capital to support the development of non-clinical device development tools that can reduce the need for or size of clinical studies to support market approval as well as steps to reduce the time and cost of clinical trials.

For example, in FY 2015, MDIC issued a catalog of available methods that can be used for collecting data on patient preferences, along with a framework for considering how to incorporate patient preferences across the total lifecycle of a device. The ultimate goal is to use these data to guide the development, assessment, and delivery of medical devices that better meet patients' needs. As a result, patients will play a more influential role in determining which treatments and diagnostics are available in the U.S. market.

Next Generation Sequencing (NGS)

Many newly developed genomic diagnostic tests rely on next generation sequencing (NGS), an advanced technology, which is becoming a keystone of precision medicine. NGS tests can rapidly generate an unprecedented amount of genetic data for each patient. Most *in vitro* diagnostic devices are used to detect a single or a defined number of markers to diagnose a limited set of conditions; in contrast, a single NGS test can identify thousands or millions of genetic variants that can be used to diagnose or predict the likelihood of an individual developing a variety of diseases.

As part of the Precision Medicine Initiative (PMI), FDA will develop a new approach for evaluating NGS technologies to facilitate the generation of knowledge about which genetic changes are important to patient care and foster innovation in genetic sequencing technology, while ensuring that the tests are accurate and reliable.

In FY 2015, FDA published a white paper outlining a possible approach to review of this technology that would greatly reduce burden by leveraging data in existing high-quality, curated genetic databases as an alternative to conducting new clinical trials and by reviewing analytical performance for only a subset of variants through the creation and use of reference standards. The Devices Program aims to ensure that NGS tests provide accurate, reproducible, and meaningful results relevant to a person's medical condition while continuing to foster innovation so that people have access to the best available results possible.

Experiential Learning Program

To help reviewers understand the challenges of technology development, manufacturing, and use, and become informed about specific current and emerging technologies, the Devices Program implemented the Experiential Learning Program (ELP). The program provides reviewers with real-world training experiences through visits to manufacturers, research facilities, and health care facilities. Since the start of the program in 2012, nearly 1,000 staff participated in 84 visits at 64 sites to gain real world knowledge of regulated products. In FY 2014 – FY 2015, the ELP General Training component was implemented to enhance staff understanding of the cross-product line issues faced throughout device development, testing, manufacturing, and clinical use.[59]

[59] Available at: http://www.fda.gov/scienceresearch/sciencecareeropportunities/ucm380676.htm

CDRH Learn

CDRH continues to proactively assist the medical device sector to efficiently deploy resources by providing interactive, high-quality responses to thousands of industry questions concerning device and radiological health regulatory issues. These efforts include CDRH Learn, a multimedia catalog of online educational modules intended to provide information about medical device laws, regulations, and policies that is comprehensive, interactive, and easily accessible. With the addition of 26 new modules in FY 2015, the catalog has grown to over 90 educational modules to help educate stakeholders. The new design, updated content and the new mobile ready format allows 24/7 access from all devices. In FY 2015, CDRH responded to over 38,000 inquiries from industry, and the CDRH Learn webpage was visited more than 165,000 times.

Customer Service

A key determinant of early U.S. patient access to high-quality, safe and effective devices is the quality of the customer service we provide to our stakeholders, including patients, industry, and health care professionals. That is why the Devices Program made providing excellent customer service a strategic priority and launched an effort to improve customer service that included staff training, surveys to measure customer satisfaction, and actions to improve the quality of service. On December 31, 2014, CDRH ended the 2014 data collection with an 83 percent Customer Satisfaction Rating. As of June 30, 2015, CDRH exceeded its June 2015 goal of 80 percent with an 88 percent Customer Satisfaction Rating, with the rating for the premarket program even higher at 93 percent. High levels of customer satisfaction can help make the United States a more attractive marketplace for early patient access to safe and effective devices of public health importance.[60]

Enhance Oversight

Ensuring manufacturer compliance with laws and regulations helps assure the safety and efficacy of devices and protects consumer confidence in U.S. medical products worldwide. The Devices Program quickly identifies major violations and takes prompt, clear, and appropriate actions to resolve issues before they have widespread negative impacts on public health. At the same time, the Devices Program monitors postmarket performance including adverse events, responds quickly to identify and limit potential public health problems, and collaborates with industry to improve the quality of medical devices for U.S. patients.

Among FDA strategic goals and priorities, the Devices Program supports Smart Regulation through efforts including the National Medical Device Evaluation System and Unique Device Identification. At the same time, Globalization is supported by The Medical Device Single Audit Program and Safety and Quality by efforts including the Case for Quality Initiative and the Mammography Quality Standards Act Program.

Guidances

Below are selected guidances issued by the FDA during calendar year 2015. These guidances help address various issues.[61]

[60] Available at: http://www.fda.gov/AboutFDA/CentersOffices/OfficeofMedicalProductsandTobacco/CDRH/ucm384176.htm
[61] For more information on guidance please visit http://www.fda.gov/RegulatoryInformation/Guidances/.

Date	#	Title	Description
Jun 2015	FDA-2015-D-2245	Unique Device Identification: Direct Marking of Devices	Draft guidance – assists industry, particularly labelers, in understanding FDA's requirements for direct marking of devices for unique device identification purposes
May 2015	FDA-2015-D-1376	Leveraging Existing Clinical Data for Extrapolation to Pediatric Uses of Medical Devices	Draft guidance – explains when to leverage existing clinical data to support pediatric device indications in premarket approval applications (PMAs) and humanitarian device exemptions (HDEs)
Mar 2015	FDA-2015-D-06029	Reprocessing Medical Devices in Health Care Settings: Validation Methods and Labeling	This guidance provides recommendations for the formulation and scientific validation of reprocessing instructions for reusable medical devices.

Medical Device Reporting

Under the Medical Device Reporting (MDR) program, FDA receives more than 1,100,000 medical device reports annually from manufacturers, importers, distributors, user facilities, and voluntary reporters. Incidents in which a device may have caused or contributed to a death or serious injury, or experienced a malfunction must be reported by manufacturers and importers.

In FY 2015, the Devices Program reviewed 95 percent of all death MDRs within five business days of the submission, enabling rapid identification of device issues and failures that help to minimize widespread consequences on public health.

To expedite the report processing and reduce the burden of data entry on the FDA, manufacturers, and importers, FDA implemented the eMDR final rule on August 14, 2015, requiring all medical device manufacturers and importers to submit their reports electronically, rather than in paper form. On August 6, 2015, FDA retired the Manufacturer and User Facility Device Experience (MAUDE) database and replaced it with the System for Uniform Surveillance (SUS). This new adverse event platform and data repository is able to house the increasing number and complexity of reports – for example, reports with images – and allows for more efficient searches and analyses.

Medical Product Safety Network

The Medical Product Safety Network (MedSun) is an "active" adverse event reporting program that allows FDA to work collaboratively with the clinical community to identify, understand, and solve problems associated with the use of medical devices.

MedSun provides a better understanding of how certain devices are used in the clinical environment, how regulatory actions against manufacturers will affect patient care in hospitals and if manufacturer recalls and other actions successfully solved the reported device problems. In FY 2015, there have been 40 recalls and 84 manufacturer actions directly influenced by MedSun reports.[62]

[62] Available at http://www.fda.gov/MedicalDevices/Safety/MedSunMedicalProductSafetyNetwork/default.htm

National Medical Device Evaluation System

In September 2012, the FDA published a report, Strengthening Our National System for Medical Device Postmarket Surveillance, which proposed a National Medical Device Surveillance System for improving and addressing the limitations of the agency's current system for monitoring medical device safety and effectiveness. This report recommended establishing a national infrastructure for gathering and analyzing real world data, or data collected as part of routine clinical practice and patient experience. In April 2013, FDA published an update to the report that describes to establish a more integrated National Medical Device Surveillance System. [63]

In February 2015, the multi-stakeholder Planning Board issued a report entitled "Strengthening Patient Care: Building an Effective National Medical Device Surveillance System," which outlines recommended steps and strategies toward achieving the national system. To that end, the Planning Board was reconvened to move forward on creation of organizational structure of a national system, development of governance, development of a sustainability plan and an implementation plan. The Device Program also made cooperative agreements to promote development of infrastructure and methodologies to support the national system.

The Device Program envisions a national system that would leverage electronic health information from electronic health records, device registries, and payer claims forms through a coordinating center that establishes strategic alliances between data holders, such as health care systems, to use de-identified information according to pre-specified policies and procedures. This system would have the capability to:

- provide benefit and risk assessments of medical devices throughout their use
- quickly identify potential safety signals in near real-time
- accurately characterize and disseminate information about real-world device performance
- efficiently generate data to facilitate the clearance and approval of new devices, or new uses of existing devices.

In FY 2015, the Devices Program achieved tremendous progress laying the groundwork for the national system, including the following:

- advanced implementation of the unique device identification (UDI) rule for the highest-risk devices, including development of a Global UDI Database (GUDID) as the repository for information that unambiguously identifies devices through their distribution and use
- built registry capabilities both domestically and internationally, including the a domestic registry for inferior vena cava filters and the International Consortium of Vascular Registries
- established a Medical Device Registry Task Force consisting of key registry stakeholders as part of the Medical Device Epidemiology Network (MDEpiNet) Program, a collaborative program to develop new and more efficient methods to study devices.

[63] Available at: http://www.fda.gov/AboutFDA/CentersOffices/OfficeofMedicalProductsandTobacco/CDRH/CDRHReports/ucm301912.htm

Unique Device Identification
On September 24, 2013, the Devices Program published the Unique Device Identification (UDI) final rule, a landmark step in improving patient safety and modernizing FDA's postmarket surveillance system for medical devices. When fully implemented, the label of most devices will include a unique device identifier in human and machine-readable form. The Devices Program also established the GUDID, an information system that serves as a reference for every device with a unique device identifier, empowering stakeholders with access to non-confidential device information.

The Devices Program is moving full speed ahead with implementing the UDI system while promoting its widespread adoption of UDI in the U.S. health care system. In FY 2015, the Devices Program:

- opened the GUDID portal, making UDI data publicly available through Access GUDID to give patients, health care systems, the device industry, and others access to better and more precise device information
- published draft guidance entitled: "Unique Device Identification: Direct Marking of Devices," helping industry understand the requirements for direct marking of devices for unique device identification purposes

The incorporation of UDI into electronic healthcare data sources, such as Electronic Health Records, will have many benefits for patients, the health care system, and the device industry. The UDI system improves the identification of medical devices by making it possible to rapidly and definitively identify the device, through distribution and use, and some key attributes that affect its safe and effective use. This system will facilitate more accurate reporting and analysis of adverse events, make recalls more efficient and effective, enhance postmarket surveillance, and ultimately facilitate device clearance and approval.[64]

Registry-Based Surveillance
Registries play a unique role in modernizing medical device surveillance because they can provide a cost effective method to gain detailed information about patients, procedures, and devices not routinely collected by electronic health records, administrative or claims data.

In FY 2015, to enhance postmarket surveillance efforts and reduce regulatory burdens on industry, the Devices Program expanded its registry-based surveillance of transcatheter valve therapy (TVT) devices using a multi-stakeholder TVT Registry. The TVT Registry is a benchmark tool developed to track patient safety and real-world outcomes involving transcatheter aortic and mitral valve replacement, a minimally invasive surgical procedure to repair a damaged valve in the heart. Information about second generation devices is now routinely captured.

The Devices Program also expanded its International Consortium of Orthopedic Registries and launched the International Consortium of Vascular Registries.

Signal Management Program
The Devices Program established the Signal Management Program (SMP) to provide processes and procedures to consistently evaluate and advance mitigation strategies for safety signals identified for medical devices on the U.S. market. A safety signal is data that suggests a

[64] Available at: http://www.fda.gov/medicaldevices/deviceregulationandguidance/uniquedeviceidentification/default.htm

potential association between a medical device and an adverse event or set of events of public health concern.

As part of SMP, the Devices Program implemented Signal Review Teams focused on high priority clinical product areas including General Hospital, Surgery, and Neurology devices. In FY 2015, SMP expanded to include the important clinical product areas of Cardiovascular and Orthopedics. SMP evaluated over 75 safety signals that have resulted in actions including device recalls, device labeling changes, and public communications to help limit and address device safety issues before they have widespread impacts on public health.

Case for Quality Initiative

Through the Case for Quality (CFQ), the FDA is working with stakeholders to foster medical device quality by identifying and promoting practices that result in high-quality devices and adapting regulatory approaches to align with those practices. FDA introduced the CFQ in an effort to help device manufacturers elevate their focus from the baseline requirements of compliance with regulations alone, and instead focus on predictive and proactive measures they can take independently to improve quality. CFQ also provides FDA the opportunity to change our approach to focus more on what matters most in assuring product and manufacturing quality and safety for patients.

As part of the initiative, the Devices Program has identified the specific operations, design considerations, and controls that improve the quality of over ten medical devices of public health importance. One of these device types is implantable devices that use batteries, which quality factors have been integrated into inspectional approaches and manufacturing requirements, allowing the Devices Program and industry to collaborate more closely on device quality during site inspections. The Devices Program aims to reduce the risk of patient harm by helping the medical device manufacturing sector deploy quality-related design and production practices to improve the safety of U.S. manufactured devices. [65]

Voluntary Compliance Improvement Pilot Program

The Devices Program launched the Voluntary Compliance Improvement Pilot (VCIP) program as part of its ongoing commitment to use smart regulation to achieve a higher return in service to American patients. Instead of an FDA inspection and the regulatory consequences that may follow, participating manufacturers are afforded the opportunity to voluntarily correct identified deficiencies if they meet VCIP program criteria.

As of FY 2015, four firms have enrolled in the VCIP program, which plan to demonstrate their ability to define problems, analyze root causes, create corrective actions and verify those actions were effective. Through the VCIP program, the Devices Program aims to improve medical device quality by promoting voluntary compliance of firms that have self-identified compliance deficiencies. [66]

Medical Device Single Audit Program

The FDA and its regulatory counterparts abroad have the weighty responsibility of ensuring the safety of the thousands of regulated medical devices imported in their countries each year. To make this task more manageable, in FY 2014, FDA and regulatory agencies in Australia, Brazil, Canada, and Japan embarked on a pilot called the Medical Device Single Audit Program

[65] Available at: http://www.fda.gov/MedicalDevices/DeviceRegulationandGuidance/MedicalDeviceQualityandCompliance/ucm378185.htm
[66] Available at: http://www.fda.gov/MedicalDevices/DeviceRegulationandGuidance/MedicalDeviceQualityandCompliance/ucm378183.htm

(MDSAP). The goal of the MDSAP pilot is to develop a process that allows a single audit, or inspection to ensure the medical device regulatory requirements for all five countries are satisfied, in an efficient yet thorough manner. As of September 2015, 50 device manufacturers have committed to participate in this program, and six third-party auditing organizations have been authorized to conduct independent MDSAP audits across five international jurisdictions.

Under the MDSAP pilot, audits will be conducted by recognized third-party organizations, and medical device regulators in the participating countries will be able to use these inspection reports when making their regulatory decisions. Not only does this program reduce the participating regulators' need to individually perform routine inspections; it allows them all to have the same reliable information about inspectional findings. Manufacturers, too, benefit from the MDSAP pilot by cutting down on the number of regulatory audits they have to host, thereby minimizing manufacturing plant and personnel disruptions.

On January 1, 2014 the MDSAP pilot reached a major milestone – manufacturers around the globe were invited to participate in the MDSAP Pilot Study and certain auditing organizations were invited to apply for MDSAP recognition. The intention of the MDSAP Pilot Study is to provide "proof-of-concept" evidence confirming that a regulatory audit conducted by MDSAP recognized auditing organization can fulfill the needs of multiple regulatory jurisdictions. On September 9, FDA posted the MDSAP Mid-Pilot Status Report to document the mid-pilot status of the objectives and performance goals defined to develop the infrastructure, processes, training, and stakeholder commitment necessary to launch the operational phase of the program – by January 2017.[67]

Digital Health Program

To better protect and promote public health and enhance outreach and education to Digital Health customers, the Devices Program established the CDRH Digital Health Program to foster consistency in existing premarket and postmarket programs. The CDRH Digital Health Program is a focused, collaborative, and responsive effort at CDRH to promote the availability of safe innovative digital heath technologies to patients in the United States. The Program is responsible for developing and implementing consistent regulatory strategies and policies for Digital Health Technologies. The broad scope of digital health includes categories such as mobile health (mHealth), health information technology (IT), wearable devices, telemedicine, and personalized medicine.

In FY 2015, the program clarified through various guidances (e.g., mobile medical apps, wireless, premarket cyber security) FDA's approach and policies towards digital health technologies. These policies focuses FDA's oversight to higher risk products so patients and clinicians using these technologies can have access to safe and effective digital health medical devices.[68]

Radiological Health Program

The Devices Program protects public safety by monitoring industry's compliance with regulatory performance standards to reduce the incidence and severity of radiation injury. The Devices Program reviews initial and period reports as well as inspects establishments that manufacture radiation emitting electronic products to determine compliance with the law. The Devices

[67] Available at: http://www.fda.gov/MedicalDevices/InternationalPrograms/MDSAPPilot/default.htm
[68] Available at http://inside.fda.gov:9003/CDRH/OfficeoftheDirector/ucm461882.htm

Program has initiated multiple efforts to improve the efficiency and effectiveness of these programs through manufacturer engagement, reliance on international standards, and proposals to reduce or eliminate unnecessary reporting. In FY 2015, this included outreach to educate foreign firms who manufacturer the majority of laser and microwave products imported into the United States.

As a regulatory agency, FDA also shares in the responsibility for strengthening radiation protection of patients and health workers with other national and international agencies, institutions, and organizations. That is why in FY 2015, FDA collaborated with stakeholders, including the International Atomic Energy Agency (IAEA) and the World Health Organization (WHO), to develop a list of priorities for radiation protection in medicine for the next decade called the Bonn Call for Action. The Bonn Call for Action is divided into ten principal actions, each of which is considered essential for strengthening radiation protection over the next decade.[69]

Mammography Quality Standards Act Program

The Mammography Quality Standards Act (MQSA) Program helps to ensure all women in the United States have access to quality mammography for the detection of breast cancer in its earliest, most treatable stages. As part of the MQSA Program, FDA and its state contract partners, annually inspect over 8,700 certified mammography facilities in the United States to ensure compliance with national quality standards for mammography. In FY 2015, over 99 percent of mammography facilities had no serious violations of the law, and less than one percent of facilities were cited with the most serious Level I violations. These MQSA certified facilities provide nearly 39 million mammography procedures annually in the United States. [70]

FUNDING HISTORY

Fiscal Year	Program Level	Budget Authority	User Fees
FY 2013 Actual	$384,427,000	$296,240,000	$88,187,000
FY 2014 Actual	$417,583,000	$320,815,000	$96,768,000
FY 2015 Actual	$442,689,000	$320,793,000	$121,896,000
FY 2016 Enacted	$450,304,000	$323,253,000	$127,051,000
FY 2017 President's Budget	$463,402,000	$325,764,000	$137,638,000

BUDGET REQUEST

The FY 2017 Budget Request is $463,402,000, of which $325,764,000 is budget authority and $137,638,000 is user fees. The budget authority increases by $2,511,000 compared to the

[69] Available at: http://www.fda.gov/downloads/Radiation-EmittingProducts/RadiationSafety/RadiationDoseReduction/UCM439602.pdf
[70] Available at: http://www.fda.gov/mammography

FY 2016 Enacted level and user fees increase by $10,587,000. The FY 2017 budget allows the Devices Program to continue to ensure the safety and effectiveness of medical devices that U.S. patients rely on every day, while facilitating scientific innovations that extend and improve lives.

BUDGET AUTHORITY

Each year, millions of American patients benefit from innovative medical devices that reduce suffering, treat previously untreatable conditions, extend lives, and improve public health. The FY 2017 budget enables the Devices Program to continue to meet its core mission to protect and promote public health, including:

- assuring patients and providers have timely and continued access to safe, effective, and high-quality medical devices and safe radiation-emitting products
- providing consumers, patients, their caregivers, and providers with understandable and accessible science-based information about products
- facilitating medical device innovation by advancing regulatory science, providing industry with predictable, consistent, transparent, and efficient regulatory pathways
- assuring consumer confidence in devices marketed in the United States.

The Devices Program's mission – geared toward a system of smart regulation – results in better, safer, more effective treatments and world-wide confidence in, and adoption of, the devices that U.S. industry produces. This work is essential to the protection and growth of the nation's medical device industry, which is made up of over 80 percent[71] small businesses, including:

- 425,000 American jobs[72]
- Over 10,000 U.S. manufacturing establishments[73]
- $55.3 billion in U.S. exports and growing, positive trade surplus of over $4 billion.[74]

The Devices Program has evolved alongside changes in medical technology and in the global marketplace. The Devices Program has implemented several new policies and programmatic improvements to ensure American patients have timely access to devices without compromising standards of safety and effectiveness.

Devices are coming to market more quickly, and more devices that go through the premarket program are being approved and cleared for marketing. The FY 2017 Budget allows the Devices Program to continue these program improvements and support a smarter, more innovative and efficient government for the American people.

Medical Product Safety and Availability: $325.8 million (+$2.5 million)

Precision Medicine: +$1.8 million
Center: +$1.8 million

With this investment, the Devices Program will establish the National Medical Device Evaluation System (NES) to identify patients who benefit most or do not benefit from specific types of devices thereby advancing Precision Medicine.

[71] Medical device small business defined as having 50 or less employees by the Medical Device Manufacturers Association.
[72] Medical device industry employment estimated using 2013 data from Dunn & Bradstreet (D & B) Inc.
[73] Medical device industry establishments estimated using 2015 data from CDRH Registration and Listing database.
[74] Export estimated using 2014 data from the U.S. International Trade Commission.

One of the biggest problems facing the success of Precision Medicine is the challenge of determining which devices are best suited for which patients because of the high cost of developing evidence. Data that can answer these questions is generated every day as a part of routine clinical practice (evidence from clinical experience or "real world" data). However, device makers, providers, and government cannot make good use of this data because there is no systematic way to gather and analyze it.

The NES would leverage electronic health information from electronic health records, device registries, and payer claims forms through a coordinating center that establishes strategic alliances between data holders, such as health care systems, to use de-identified information according to pre-specified policies and procedures.

While the long-term vision for the NES involves multi-stakeholder participation and investment, in order to garner meaningful financial support from the private sector, the NES needs a core investment from the U.S. government. This funding would support the creation of the coordinating center and initial alliances. The Devices Program would have a governing board populated by representatives of the critical stakeholder communities, including patients, providers, industry, payers, and government.

Without additional funding, the U.S. will continue not to know which patients would or would not benefit from which types of medical technologies As a result, the U.S. would continue to provide less than optimal care and at a higher cost due to the inappropriate treatment or failure to treat appropriate patients.

Supporting Medical Device Review: +$0.7 million
Center: +$0.7 million

The Devices Program strives to increase the efficiency of regulatory processes with a goal of reducing the time it takes to bring safe and effective medical devices to the U.S. market. The requested increase supports ongoing review activities in the Devices Program to meet statutory requirements for the review of medical device applications. As a result, the Devices Program can continue to ensure the safety and effectiveness of medical devices that Americans rely on every day, while facilitating scientific innovations that extend and improve lives.

USER FEES

Current Law User Fees: +$10.6 million

Compared to FY 2016 Enacted level, The FY 2017 Budget request includes an increase of $10,587,000 for User Fees which will allow FDA to fulfill its mission of protecting the public health, treating and curing diseases, and accelerating innovation in the industry.

MDUFA: +$6.3 million
The Devices Program is committed to increasing the efficiency and timeliness that medical devices are developed and made available to U.S. patients. MDUFA III is scheduled to expire on October 1, 2017, and FDA is ready to work with industry, patients, and Congress in the statutory process toward reauthorization to ensure adequate funding of the Devices Program over the next five years.

As of FY 2016, the Devices Program is on track to meet all of its MDUFA III performance goals related to device review, and premarket performance measures show marked improvement since the start of the current decade. FY 2017 User Fee increases allows the Devices Program to

sustain and build on its record of accomplishment in bringing down total review times for 510(k) submissions, de novo requests, IDEs, and PMA applications, without compromising assurances that devices marketed to American patients are safe and effective.

MQSA: +$0.4 million
This inflationary increase permits FDA to cover the increasing cost of running the MQSA Program. The MQSA program sets national quality standards for mammography facilities, equipment, personnel, and operating procedures, and has improved the quality of mammography and made mammograms a more reliable tool to detect breast cancer in the United States.

International Courier User Fee: +$3.9 million
Millions of shipments of medical product commodities enter the United States through express courier facilities, and the number continues to grow. These shipments are often destined for individual consumers or for illegal distribution. The user fee resources for this activity will allow increased import surveillance of FDA-regulated products at express courier hubs. With this new user fee, FDA will:

- conduct entry reviews
- perform sample collections and physical exams to determine product admissibility into the United States
- initiate compliance actions to prevent release of unsafe products into U.S. commerce
- establish import controls to prevent future unsafe products from entering U.S. commerce

Current FDA staffing does not match the expected growth in import volume. Federal Express and other couriers have indicated that they expect a growth of over 60 percent in shipments during the next year, further taxing FDA resources. To address the growing volume of imports entering through international couriers, FDA is proposing to pay the cost of these import operations through a new user fee.

PERFORMANCE

The Devices Program's performance measures focus on premarket device review, postmarket safety, compliance, regulatory science, and Mammography Quality Standards activities assuring the safety and effectiveness of medical devices and radiological products marketed in the United States, as detailed in the following table:

Measure	Year and Most Recent Result / Target for Recent Result (Summary of Result)	FY 2016 Target	FY 2017 Target	FY 2017 +/- FY 2016
253203: Percentage of received Original Premarket Approval (PMA), Panel-track PMA Supplement, and Premarket Report Submissions reviewed and decided upon. *(Outcome)*	FY 2012: 79% in 180 days and 97% in 295 days Target: 60% in 180 days and 90% in 295 days (Target Exceeded)	90% in 180 days	90% in 180 days	maintain
253204: Percentage of 180 day PMA supplements reviewed and decided upon within 180 days. *(Outcome)*	FY 2013: 98% in 180 days Target: 85% in 180 days (Target Exceeded)	95% in 180 days	95% in 180 days	maintain
253205: Percentage of 510(k)s (Premarket Notifications) reviewed and decided upon within 90 days. *(Outcome)*	FY 2013: 98% in 90 days Target: 91% in 90 days (Target Exceeded)	95% in 90 days	95% in 90 days	maintain
253201: Number of Medical Device Bioresearch Monitoring (BIMO) inspections. *(Output)*	FY 2015: 305 Target: 300 (Target Exceeded)	300	300	maintain
252203: Percent of total received Code Blue MDRs reviewed within 72 hours during the year. *(Output)*	FY 2015: 91% Target: 90% (Target Exceeded)	90%	90%	maintain
254202: Percentage of time CDRH meets the targeted deadline of 60 working days to review GMP information and issue Device Warning Letters. *(Output)*	FY 2015: 35% Target: 60% (Target Not Met)	50%	50%	maintain

Measure	Year and Most Recent Result / Target for Recent Result (Summary of Result)	FY 2016 Target	FY 2017 Target	FY 2017 +/- FY 2016
254203: Percentage of time CDRH meets the targeted deadlines for on-time recall classification (*Output)*	FY 2015: 89% (Target Exceeded)	85%	85%	maintain
254201: Number of domestic and foreign Class II and Class III device inspections. *(Output)*	FY 2015: 2,080 Target: 1,600 (Target Exceeded)	1,600	1,600	maintain
252101: Number of technical analyses of postmarket device problems and performance. *(Output)*	FY 2015: 51 Target: 50 (Target Exceeded)	50	50	maintain
253207: Number of technical reviews of new applications and data supporting requests for premarket approvals. *(Output)*	FY 2015: 2,480 Target: 2,000 (Target Exceeded)	2,000	2,000	maintain
254101: Percentage of an estimated 8,700 domestic mammography facilities that meet inspection standards, with less than 3% with Level I (serious) problems. *(Outcome)*	FY 2015: 99.2% Target: 97% (Target Exceeded)	97%	97%	maintain

The following selected items highlight notable results and trends detailed in the performance table.

Premarket Device Review
FDA is committed to protecting and promoting public health by providing timely access to safe and effective medical devices by providing reasonable assurance of the safety and effectiveness of medical devices. In FY 2012 and FY 2013, FDA exceeded all of its MDUFA III performance goals, and raised the future targets to keep pace with the MDFUA III commitments.

Code Blue Medical Device Reports
Code Blue Medical Device Reports (MDRs) are defined as high priority MDR reports based on criteria including but not limited to pediatric deaths, multiple deaths and serious injuries, device explosions, and electrocutions. Timely review of code blue MDRs can minimize widespread failure of the device, thereby limiting the loss of life due to similar events as the one submitted.

Warning Letters
Warning Letters are issued after inspections reveal there are significant violations of the Federal Food, Drug, and Cosmetic Act at a particular firm. These letters give the individuals or firms an

opportunity to take voluntary and prompt corrective action before FDA initiates an enforcement action. This strategy is effective because most, though not all, individuals and firms will voluntarily comply with the law. In FY 2015, CDRH did not meet the target for this measure, in part because of a significant increase in Foreign Establishment Inspection Report's (EIRs) that led to a surge in the expected workload. CDRH will continue to improve the review process for these letters, however the continued increase in workload and complexity of the issues, requires a recalibration of the future targets of this goal to 50 percent in the next two years, which is still an increase over the last two years of actual data.

PROGRAM ACTIVITY DATA

Devices and Radiological Health Program Activity Data (PAD)

CDRH Workload and Outputs	FY 2015 Actual	FY 2016 Estimate	FY 2017 Estimate
Original PMAs and Panel-Track Supplements (without Advisory Committee input)			
Workload [1]	65	40	40
Total Decisions [2]	50	50	40
Approved [3]	32	45	35
Original PMAs and Panel-Track Supplements (with Advisory Committee input)			
Workload	4	5	5
Total Decisions [2]	10	5	5
Approved	7	4	4
Modular PMAs			
Workload	102	70	70
Actions [4]	84	75	70
180-day PMA Supplements			
Workload	201	180	180
Total Decisions [5]	182	190	180
Approved	167	175	165
Real Time PMA Supplements			
Workload	335	340	340
Total Decisions [6]	324	320	320
Approved	297	305	305
510(k) Premarket Notifications			
Workload	3,726	4,000	4,000
Total Decisions [7] (SE & NSE)	3,160	3,300	3,300
Cleared [9] (SE)	3,080	3,150	3,150
Humanitarian Device Exemptions (HDE)			
Workload	5	6	6
Total Decisions [2]	11	6	6
Approved	4	3	3
Investigational Device Exemptions (IDE)			
Workload	268	250	250
Total Decisions [8]	266	250	250
Approved	153	150	150
Investigational Device Exemption Supplements			
Workload	1,692	1,800	1,800
Closures [10]	1,701	1,800	1,800
Pre-Submissions			
Workload	2,154	2,100	2,200
Closures [11]	2,070	2,100	2,200
Standards			
Total Standards Recognized for Application Review	1,106	1,250	1300
Medical Device Reports (MDRs) [12]			
Reports Received	1,245,715	2,056,000	2,672,800
Analysis Consults [13]	1,105	1,460	1,678

[1] Workload' includes applications received and filed. (Receipt Cohort)

[2] Total Decisions' include approval, approvable, approvable pending GMP inspection, not approvable, withdrawal, and denial - regardless of the fiscal year received. (Decision Cohort)

[3] Approved' includes applications approved regardless of the fiscal year received. (Decision Cohort)

[4] Actions' include accepting the module, request for additional information, receipt of the PMA, and withdrawal of the module. (Decision Cohort)

[5] Total Decisions' include approval, approvable, approvable pending GMP inspection, and not approvable. (Decision Cohort)

[6] Total Decisions' include approval, approvable, and not approvable. (Decision Cohort)

[7] Total Decisions' include substantially equivalent (SE) or not substantially equivalent (NSE). (Decision Cohort)

[8] Total Decisions' include approval, approval with conditions, disapproved, acknowledge, incomplete, withdrawal, or other. (Decision Cohort)

[9] Cleared' includes substantially equivalent decisions (SE). (Decision Cohort)

[10] Closures' include approval, approval with conditions, disapproved, acknowledge, incomplete, no response necessary, withdrawal, or other. (Decision Cohort)

[11] Closures' include a meeting with Industry, deficiency, or other. (Decision Cohort)

[12] MDRs' include individual and summary Medical Device Reports.

[13] Analysis Consults' include analysis of individual and summary Medical Device Reports (analyzing trends and signals in MDR data).

Field Devices and Radiological Health Program Activity Data (PAD)

Field Devices and Radiological Health Program Workload and Outputs	FY 2015 Actuals	FY 2016 Estimate	FY 2017 Estimate
FDA WORK			
DOMESTIC INSPECTIONS			
UNIQUE COUNT OF FDA DOMESTIC DEVICES ESTABLISHMENT INSPECTIONS	***2,587***	***2,864***	***2,864***
Bioresearch Monitoring Program Inspections	296	300	300
Pre-Market Inspections	57	67	67
Post-Market Audit Inspections	34	34	34
GMP Inspections	1,555	1,594	1,594
Inspections (MQSA) FDA Domestic (non-VHA)	625	723	723
Inspections (MQSA) FDA Domestic (VHA)	53	43	43
Domestic Radiological Health Inspections	42	101	101
Domestic Field Exams/Tests	96	139	139
Domestic Laboratory Samples Analyzed	176	183	183
FOREIGN INSPECTIONS			
UNIQUE COUNT OF FDA FOREIGN DEVICES ESTABLISHMENT INSPECTIONS [1]	***729***	***603***	***603***
Foreign Bioresearch Monitoring Inspections	14	25	25
Foreign Pre-Market Inspections	42	31	31
Foreign Post-Market Audit Inspections	26	19	19
Foreign GMP Inspections	639	521	521
Foreign MQSA Inspections	14	15	15
Foreign Radiological Health Inspections	55	45	45
TOTAL UNIQUE COUNT OF FDA DEVICE ESTABLISHMENT INSPECTIONS	***3,316***	***3,467***	***3,467***
IMPORTS			
Import Field Exams/Tests	26,654	18,821	18,821
Import Laboratory Samples Analyzed	658	1,123	1,123
Import Physical Exam Subtotal	**27,312**	**19,944**	**19,944**
Import Line Decisions	17,252,283	19,044,228	21,022,297
Percent of Import Lines Physically Examined	0.16%	0.10%	0.09%
STATE WORK			
UNIQUE COUNT OF STATE CONTRACT DEVICES ESTABLISHMENT INSPECTIONS	***7,904***	***7,929***	***7,929***
UNIQUE COUNT OF STATE PARTNERSHIPS DEVICE ESTABLISHMENT INSPECTIONS [2]	***0***	***0***	***0***
Inspections (MQSA) by State Contract	6,809	6,800	6,800
Inspections (MQSA) by State non-Contract	1,075	1,110	1,110
GMP Inspections by State Contract	20	19	19
State Partnership GMP Inspections	0	0	0
State Contract Devices Funding	$287,518	$296,144	$305,028
State Contract Mammography Funding	$9,317,189	$9,596,705	$9,884,606
Total State Funding	**$9,604,707**	**$9,892,849**	**$10,189,634**
GRAND TOTAL DEVICES ESTABLISHMENT INSPECTIONS	***11,220***	***11,396***	***11,396***

[1] The FY 2015 actual unique count of foreign inspections includes 10 OIP inspections (9 for China and 1 for India).

[2] The State inspections that are funded by the FDA are now being obligated via formal contract funding vehicles.

NATIONAL CENTER FOR TOXICOLOGICAL RESEARCH

(Dollars in Thousands)	FY 2015 Final	FY 2015 Actuals	FY 2016 Enacted	FY 2017 President's Budget	FY 2017 +/- FY 2016
National Center for Toxicological Research (BA Only).....	63,331	63,312	63,331	60,277	-3,054
FTE.....	287	276	276	276	---

Authorizing Legislation: Federal Food, Drug, and Cosmetic Act (21 U.S.C. 393(b) (1)); Food and Drug Administration Modernization Act; Food and Drug Administration Amendments Act of 2007; FDA Food Safety Modernization Act (P.L. 111-353)

Allocation Methods: Direct Federal/Intramural

PROGRAM DESCRIPTION AND ACCOMPLISHMENTS

The National Center for Toxicological Research (NCTR) was established in 1971. As a national scientific resource, NCTR conducts peer-reviewed research to advance scientific approaches and tools required to support public health and to improve FDA's ability to assess the safety of regulated products.

NCTR supports FDA's strategic priorities to advance regulatory science and engage globally to encourage the implementation of science-based standards. In support of FDA's strategic goals to Enhance Oversight of and Improve Access to FDA-regulated products, NCTR enhances FDA's basis for science-based regulatory decisions by conducting collaborative research to:

- identify adverse effects earlier in product development
- provide strategies to reduce and rapidly detect contaminants in FDA-regulated products
- use biomarkers – biological indicators – to promote individualized precision medicine
- accelerate FDA's capability to manage and analyze research data using bioinformatics
- understand the risks and benefits of nanoscale materials used in FDA-regulated products
- reduce costly and dangerous surgical procedures by expanding imaging capabilities
- expedite the translation of scientific advancements to regulatory application.

The following selected accomplishments demonstrate NCTR's delivery of its regulatory and public-health responsibilities within the context of current FDA Strategic Priorities and Goals.[75]

Enhance Oversight

NCTR's research allows FDA to use regulatory science to inform standards development, analysis, and decision-making for the safety of FDA-regulated products. NCTR conducts a full range of studies in support of FDA's product portfolio as seen in the illustrations below. Within the Goal of Oversight, NCTR conducts research in Pediatric Medicine along with Antimicrobial Resistance and the Human Microbiome that also address the FDA Strategic Priority on Regulatory Science.

Pediatric Medicine

Advancements at NCTR's bio-imaging facility allow FDA to gather information not previously obtainable to help the medical community understand pediatric-anesthetic use and its adverse

[75] More information on NCTR Research Accomplishments can be found at: http://www.fda.gov/AboutFDA/CentersOffices/OC/OfficeofScientificandMedicalPrograms/NCTR/ResearchAccomplishmentsPlans/default.htm

effects on children. These effects are assessed using minimally invasive imaging technology, allowing visualization of biological processes in "real time," with as little interference as possible with life processes. Four manuscripts published in FY 2015 describe researchers' findings on this topic. This research is aimed at the translation of these imaging technologies from the laboratory animal to the clinical setting to reduce adverse effects to children.

In FY 2015 NCTR investigators, in collaboration with UAMS and the Sanford-Burnham Medical Research Institute, demonstrated significant changes and nerve cell damage in brains of infant nonhuman primates exposed to the anesthetic sevoflurane for prolonged periods. This study found potentially sensitive indicators of brain status after anesthetic exposure. A manuscript describing this study is now available online at Toxicological Sciences[76].

NCTR scientists, in collaboration with CDER, extended their original studies on the pediatric anesthetics ketamine, isoflurane, and nitrous oxide to include propofol and sevoflurane. While certain concentrations of anesthesia were found to have adverse effects, scientists found that the chemical acetyl-L-carnitine provides neuroprotective properties when given prior to and during administration of the pediatric anesthetics. Validation of these findings is underway.

Another method NCTR scientists will use to assess developmental neurotoxicity is by using human neural stem-cell models and biomarkers. These data provide the scientific framework critical to updating the best practices for pediatric anesthetics.

The effects of pediatric anesthesia are also being studied in collaboration with the Mayo Clinic using an NCTR-developed method. The Mayo clinic is using NCTR-generated data to compare with some of their neuropsychological tests. Initial comparisons are showing some very significant correlations, the importance of which is under evaluation. This study will also compare the effects of childhood-administered anesthesia on brain function which may be used by FDA to establish administration guidelines in children.

Research to understand the effects of drugs on children continued in FY 2015. This research has specifically identified potential biomarkers of acetaminophen (APAP) injury in children. The pilot study compared the overdose group with healthy children and children receiving therapeutic doses of APAP. Researchers found markers in urine and blood that may be used as biomarkers (biological indicators) of liver injury. A manuscript describing the results of this study is now available online at *Toxicology and Applied Pharmacology*[77].

Also in FY 2015, NCTR scientists collaborated with clinical partners at the University of Arkansas for Medical Sciences and identified several indicators associated with liver injury in children with APAP overdose compared to healthy controls. A manuscript describing these results has been accepted by *PLOS ONE*[78], a peer-reviewed scientific journal.

Antimicrobial Resistance and the Human Microbiome

NCTR scientists are conducting projects to limit the emergence and spread of drug resistance in bacterial pathogens. All of these projects support FDA's regulatory needs related to the pool of antimicrobial resistance genes and bacterial pathogens in feed, foods, clinical and environmental samples, and the potential effects of transmission of resistant bacteria on human health.

[76] For more information please visit http://dx.doi.org/10.1093/toxsci/kfv150.
[77] For more information please visit http://dx.doi.org/10.1016/j.taap.2015.02.013.
[78] For more information please visit http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0131010.

The use of veterinary antimicrobial agents in food-producing animals may result in humans being exposed continuously to low levels of antimicrobial residues in food as part of their daily diet. The human gastrointestinal tract is colonized by microorganisms – also known as the microbiome – that are known to play important roles in preventing colonization and infection by disease-causing microorganisms. Because therapeutic doses of antimicrobials shift the microbial population in the gastrointestinal tract, they may worsen the disease and promote the emergence of antimicrobial-resistant bacteria.

In FY 2015, NCTR research data was used to support the Veterinary International Conference on Harmonization Guideline 36 – FDA Guidance #159[79] – on the human safety of antimicrobial drugs to determine what fraction of the veterinary drug residue in the human colon remains biologically active. Going forward, scientists will determine if antimicrobial agents at food-level residue concentrations can change the antimicrobial-resistance of the human microbiome. This research will support Guideline 36, FDA, other regulatory agencies, and industry with data and methods to enhance safety evaluation of veterinary antimicrobial residues in food.

The bacteria *Clostridium perfringens* is commonly reported to cause foodborne illness in the United States. As a member of the human microbiome, this bacteria comes in contact with antimicrobial agents when a person consumes a food animal that has been treated for an infection. In FY 2015, NCTR scientists studied and determined the prevalence of antibiotic-resistance genes in *C. perfringens* and the similarity of these genes to those of other foodborne pathogens to better understand and address foodborne illness.

NCTR scientist conducting bacterial detection analysis.

Additionally, NCTR scientists investigated the genetic diversity and potency of the potential bioterrorism agent, *E. coli*, in FY 2015. The bacteria in the study were gathered from humans, cattle, and some food samples. More than 80 percent of the samples carried the lethal gene, and nearly 25 percent of the samples carried this gene and an additional gene that can contribute to the ability of the bacteria to attach to human intestines. The presence of these genes makes these bacteria potentially dangerous to humans if they are ingested. Furthermore, NCTR scientists found that nearly 88 percent of these bacteria can carry antimicrobial resistance and virulence genes.

To treat and prevent human illness, NCTR is evaluating new approaches to determine the antimicrobial properties of nanoparticles towards drug-resistant pathogens to treat and prevent illnesses. Nanoparticles as antimicrobial agents offer an innovative approach to tackle antimicrobial resistance in bacteria, but their long-term effects are not known. NCTR scientists are studying the antimicrobial effects of nanoparticles on bacteria and their toxic effects in human cells. FDA needs science-based information in this area to regulate nanoparticle-containing products to ensure that they are safe for humans with no adverse health effects.

[79] FDA Guidance #159 can be found at: http://www.fda.gov/downloads/AnimalVeterinary/GuidanceComplianceEnforcement/GuidanceforIndustry/UCM052505.pdf.

Improve and Safeguard Access

NCTR conducts research to increase regulatory science capacity to evaluate FDA-regulated products in a more predictable, consistent, and efficient way. Within this Goal area, research in Bioinformatics Technologies, Precision Medicine, Nanotechnology, and Imaging Capabilities addresses the FDA Strategic Priority on Regulatory Science.

NCTR's exemplary reputation in the research community means the Center is often sought as a collaborator and advisor. NCTR partners internally and externally to share research knowledge, technical advice, and research training through global collaborations. Within this Goal area, the Global Summit on Regulatory Science, Bioinformatics Collaborations, and Nanotechnology Collaborations address the FDA Strategic Priority on Globalization.

Bioinformatics

Bioinformatics is an interdisciplinary field that uses software tools to develop and improve methods for storing, managing, and analyzing large quantities of biological data. NCTR develops, provides training for, and makes available new bioinformatics tools to FDA and the global research community. With increasing amounts of data being generated by new technologies, FDA must have the software and database tools to manage the large amount of scientific data required to improve product development, safety assessments, and risk analysis. Below are some examples of NCTR's uses of bioinformatics.

ArrayTrack™ – FDA's Bioinformatics Infrastructure

The foundation of NCTR's bioinformatics infrastructure is ArrayTrack™, an NCTR-developed publicly available database and data-analysis tool. NCTR staff annually trains FDA staff how to use the ArrayTrack™ functionality in research and product reviews, such as:

- SNPTrack[80] – stores and organizes research data and measures the impact of genetic variation on drug treatment and precision medicine
- Endocrine Disruptor Knowledge Base (EDKB)[81] – a database of roughly 8,000 chemicals that interfere with the endocrine systems, leading to adverse effects. This data is used to develop computer-based predictive models that are quicker and less expensive that traditional experiments.
- Estrogenic Activity Database (EADB)[82] – part of the EDKB discussed above; assembles data from a variety of data sources and contains 18,114 data points collected for 8,212 chemicals tested in 11 different species.

Both EDKB and EADB have been incorporated into larger government-initiated toxicological projects, such as EPA's Tox21. In FY 2015, scientists compared the EADB data with other government agencies' data and found it to be consistent, indicating EADB's value in the risk assessment of chemicals.

FDALabel Database – Analyzing Drug Labelings

FDASIA requires "…inclusion of demographic subgroups in clinical trials and data analysis." NCTR scientists are refining FDALabel, an application that allows FDA to manage and analyze

[80] For more information please visit:http://www.fda.gov/ScienceResearch/BioinformaticsTools/SNPTrack/default.htm
[81] For more information please visit: http://www.fda.gov/ScienceResearch/BioinformaticsTools/EndocrineDisruptorKnowledgebase/default.htm
[82] For more information please visit: http://www.fda.gov/ScienceResearch/BioinformaticsTools/EstrogenicActivityDatabaseEADB/default.htm

a set of more than 70,000 drug labelings. FDALabel enhances drug-safety assessments for demographic subgroups that allow for personalization of treatment in the clinical setting.

Hundreds of new or updated drug labeling with information about product indications, target populations, and adverse drug reactions are added weekly to the database. This rapid growth along with the 2006 FDA's Physician Labeling Rule, which required clear and concise prescribing information and specific formatting for drug labeling, poses a challenge for FDA staff who review labeling for safety and effectiveness data by demographic subgroups. FDALabel addresses this challenge and also makes previously-unavailable information easy for reviewers and researchers to access. FDALabel is being regularly used by:

- researchers for adverse drug-reaction studies
- FDA medical officers for drug review
- pharmaceutical companies for drug development and repositioning
- physicians and consumers for drug-safety information.

In FY 2015, NCTR updated an FDA-only version of FDALabel in collaboration with CDER to allow FDA users to look at drug-approval history, distinguish different labeling formats, search labelings by adverse reaction, and identify drugs in a specific FDA-established class.

Precision Medicine

Biomarker development is a tool for predicting FDA-regulated product toxicity and providing precision medicine solutions. A biomarker is a biological indicator of a biological state or condition. NCTR scientists continue research to identify new biomarkers that can be used to identify populations susceptible to drug side-effects, predict harmful effects of drugs during safety evaluations, reduce, or reverse cardiac injury, or improve therapeutic patient treatments as shown in the following research.

Side-effects of drugs based on sex-differences may not be adequately addressed in preclinical evaluations and better methods are needed to identify susceptible populations. In FY 2015, NCTR scientists assembled a comprehensive list of drug-interacting enzymes – biological accelerators – and linked them to specific genetic interactions. Twenty nine of these enzymes were found to be different based on gender and involved in the metabolism of more than 600 drugs. The successful construction of this database will allow the modeling and prediction of possible toxicity based on sex differences.

Chronic cardiotoxicity – toxicity of the heart – induced by an anticancer drug, doxorubicin (DOX), is dose-dependent, cumulative, irreversible, and seemingly more prevalent in men. It is also a major concern of clinical oncologists. However, the mechanisms that cause the difference in susceptibility between the sexes are unclear. In FY 2015, NCTR scientists developed a mouse model of sex-related differences in DOX cardiotoxicity. The observation was that male mice did show a greater susceptibility to DOX than female mice. This newly established mouse model will help to assess sex-related differences and improve safety assessments.

Also to help address DOX cardiotoxicity, NCTR scientists partnered with the National Cancer Institute, Korea University, and the Arkansas Heart Hospital. This collaboration used a mouse model of DOX-induced heart injury to develop candidates for early biomarkers of cardiotoxicity. Currently, the dose amount of this cancer-fighting drug is determined by general estimates of toxicity. This study identified a dosage likely to lead to cardiac disease and also suggests identification signals – combination of cell death, thickening and scarring of tissue, and the

formation of a small cavity in a cell – that may contribute to the development of cardiac impairment due to DOX-treatment. These early biomarkers of DOX-induced heart injury will produce more effective treatment regimens. A paper describing this study is available online at *Toxicology and Applied Pharmacology*.[83]

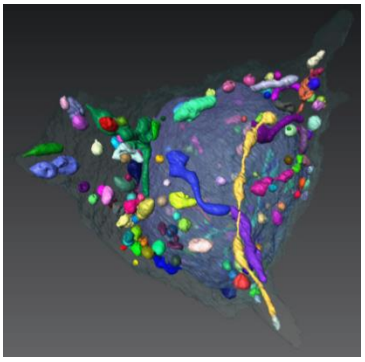
Another precision medicine effort completed in FY 2015 identified genetic variants associated with cardiovascular disease and responses to anti platelet-aggregation drugs – drugs that decrease the clumping together of platelets in the blood which may form a clot. NCTR scientists performed association studies among 120 Amish participants. Eight genetic variants in the Amish population were validated as being associated with adverse reactions to an anti-platelet aggregation drug. Studies for a genetic variant showing an association with increased aspirin efficacy towards anti-platelet aggregation are ongoing.

Also ongoing is NCTR research looking at autism spectrum disorders that are on the rise and of which the exact cause is unknown. It has been proposed that stressors occurring in the uterus make offspring more vulnerable to mood disorders, although the transmission between parent and offspring is not well-understood. NCTR scientists, in collaboration with UAMS, are conducting a study to identify new biomarkers for risk assessment of autism spectrum disorders during pregnancy. Once the biomarkers are validated in a larger study population, it may be possible to develop potential drug interventions that may enhance a positive outcome in offspring.

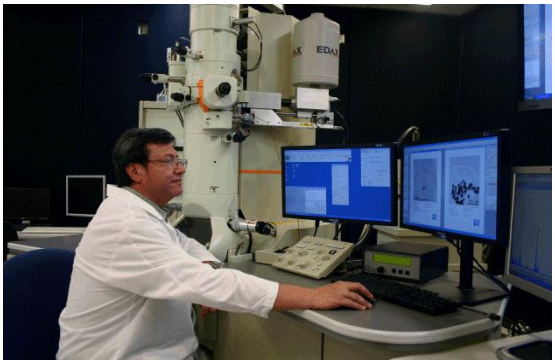
Nanotechnology

The NCTR and ORA Nanotechnology Core Facility (NanoCore) is supporting collaborative efforts within FDA, other U.S. government agencies, and university researchers providing analytical project support. This work will inform FDA and other government agencies on the toxicity and safety of nanotechnology-based materials.

FDA reviews submissions for new and generic drugs, medical devices, food, and veterinary products based on consensus standards developed in collaboration with industry. There has been a global increase of nanotechnology research and maturity of nanotechnology-enabled products regulated by FDA. The NanoCore conducts regulatory science in Nanotechnology to foster



This NanoCore image shows a 3D reconstruction of a rat neuron, an example of the two- and three-dimensional electron microscopy techniques to quantify mitochondria defects.



NanoCore scientist conducting electron microscopy.

[83] For more information please visit http://dx.doi.org/10.1016/j.taap.2014.10.006

development of FDA-regulated products containing nanomaterials and the standards to assess the safety of these products.

The NCTR NanoCore, along with CDER and CVM, is conducting collaborative studies to understand how these tiny nanoparticles travel through the blood and distribute in different parts of the human body. FDA scientists are using an advanced modeling approach, called Physiologically-Based Pharmacokinetic (PBPK) modeling to quantitatively describe and predict the biodistribution of both the nanoparticles and drug molecules. Results from these studies will help to establish science-based minimum standards for conducting hazard analysis of regulated products containing nanoparticles.

Magnetic Resonance Imaging (MRI)

Full-brain MRI imaging offers the potential to dramatically improve detection of neurotoxicity produced by new drugs and facilitate new drug development and evaluations. Additionally, NCTR has made significant progress towards the development of minimally invasive diagnostic methods for identifying nervous-system tissue anomalies. The technology, derived from FDA-regulated MRI instruments, is called magnetic resonance spectroscopy (MRS). NCTR in collaboration with Huntington Medical Research Institute has developed a method to improve the use of MRS scans to predict or diagnose medical abnormalities without the need for biopsies. Scientists are currently using this NCTR-developed method for identifying Alzheimer's, dementia, and mild cognitive impairment and soon will begin a project to identify traumatic brain injury.

Preclinical MRI machine - one of the pieces of equipment used in the NCTR Bio-Imaging Facility.

In FY 2015, NCTR researchers in collaboration with CDER used ten neurotoxicants to test the ability of MRI technology to both detect and follow the course of events typically observed under traditional evaluation. It was found that the MRI can provide the equivalent of 64 visual "slices" of the brain instantly to the pathologist for targeting regions of interest for further evaluations.[84]

New and continuing imaging research at NCTR includes:

- studying the relationship of MRI findings with biological fluid biomarkers
- using an advanced sodium MRI approach to detect very early signals of neurotoxicity
- using MRI approaches to detect liver-transport function as a marker of drug-induced liver injury.

Collaborations

A critical component of NCTR's and FDA's science portfolio is collaborations with other entities to leverage knowledge and to establish research partnerships where expertise from each entity can contribute to regulatory-science research projects. A strong in-house science base and

[84] For additional information, the manuscript is available online at Regulatory Toxicology and Pharmacology. http://www.sciencedirect.com/science/article/pii/S0273230014002153

a network of collaborations is necessary to help support FDA's success in addressing public-health challenges.

Scientific advancements are enhanced by participation in meetings and conferences where experts present their most current research and through collaborations and relationships, both formal and informal, that provide FDA with access to cutting-edge science. Support of this important strategic priority is reflected in the following highlighted collaborations.

Global Summit on Regulatory Science
Because of the importance for international regulators, policy makers, and scientists to exchange views on how to develop, apply, and implement innovative methodologies into regulatory assessments, NCTR established an annual Global Summit on Regulatory Science (GSRS).

Now in its sixth year, GSRS' goal is to engage the global community and harmonize research strategies via collaborations that aim to build knowledge of and promote regulatory science, define research needs, and seek to strengthen product safety worldwide by training regulatory scientists. The GSRS is led by the Global Coalition which is comprised of regulatory science leaders from around the world. NCTR's Director serves as the FDA scientific representative and co-chair of the Coalition's executive committee and works with the Coalition to promote global interaction.

The 2015 Global Summit was hosted by the European Food Safety Authority in Parma, Italy and included more than 100 leading international scientists from 25 countries. A paper titled "Genomics in the Land of Regulatory Science" was published in FY 2015 in *Regulatory Toxicology and Pharmacology*[85] that summarized the 2014 Global Summit.

Bioinformatics Collaborations
NCTR and the Arkansas state university system held the first annual Arkansas Bioinformatics Consortium[86] conference in March 2015 to leverage statewide bioinformatics capabilities. The conference was organized by NCTR and the Arkansas Research Alliance. The topics this year focused on precision medicine and regulatory sciences applications. The second annual meeting is scheduled for April 2016.

This consortium will increase resources for FDA regulatory science and strengthen the FDA Memorandum of Understanding (MOU) with the state of Arkansas.

Nanotechnology Collaborations
The NCTR and ORA Nanotechnology Core Facility (NanoCore) is supporting collaborative efforts within FDA, other U.S. government agencies, and university researchers providing analytical project support. NCTR and the NanoCore are currently providing analytical support for nanotechnology investigative projects with FDA Product Centers CDRH, CDER, CFSAN, CVM, and ORA. This work will inform FDA and other U.S. government agencies on the toxicity and safety of nanotechnology-based materials.

Through an MOU between the State of Arkansas and FDA, a consortium of five Arkansas research universities provided FDA with comprehensive data on the synthesis and detection of graphene. In FY 2015, the NanoCore identified that graphene was contaminated with endotoxin – cell wall debris from bacteria – which can lead to a false determination that graphene is toxic.

[85] For more information http://www.sciencedirect.com/science/article/pii/S0273230015000550
[86] For more information http:// www.arkansasbioinformatics.org

The NanoCore has taken procedures to reduce the endotoxin to acceptable levels so that graphene can be used in toxicological studies. This information is important because of the human exposure to graphene-based nanomaterials rapidly being developed for use in a variety of biomedical and food-packaging applications, and which is being touted in scientific literature as a platform for drug delivery. NCTR continues to coordinate, conduct, and collaborate with researchers around the globe to meet FDA regulatory-research requirements.

FUNDING HISTORY

Fiscal Year	Program Level	Budget Authority	User Fees
FY 2013 Actual	$54,965,000	$54,965,000	$0
FY 2014 Actual	$62,488,000	$62,488,000	$0
FY 2015 Actual	$63,312,000	$63,312,000	$0
FY 2016 Enacted	$63,331,000	$63,331,000	$0
FY 2017 President's Budget	$60,277,000	$60,277,000	$0

BUDGET REQUEST

The FY 2017 Budget Request is $60,277,000 which is all budget authority. The budget authority decreases by $3,054,000 compared to the FY 2016 Enacted level. This reduction in budget authority will delay the progress or start of critical research projects at NCTR on food safety issues, delaying advances in regulatory science.

The FY 2017 budget request allows NCTR to conduct ground-breaking research to support the FDA Strategic Goals of Oversight and Improve and Safeguard Access. These areas of research include emerging technologies, such as nanotechnology, bio-imaging, bioinformatics, and biostatistics. Specifically, NCTR will continue to:

- expedite the translation of scientific advancements to regulatory application
- develop new tools and approaches to assess the safety and efficacy of regulated products
- integrate toxicology safety assessments maximizing existing and emerging technologies
- provide valuable research data on products using new technologies
- help FDA better understand data submissions that are generated using new technologies.

NCTR will conduct research to enhance oversight of FDA-regulated products by using funding to develop tools and methods that will be used to inform standards development, analysis, and decision-making for the safety of FDA-regulated products and to expedite the translation of basic science to regulatory application. This research allows FDA to capitalize on the global scientific advancements and expand FDA's regulatory-science capacity by increasing the speed at which *in vitr*o and animal models are put to use in determining safety of FDA-regulated products.

NCTR will conduct research to improve and safeguard access to FDA-regulated products by increasing regulatory-science capacity to evaluate FDA-regulated products in a more predictable, consistent, and efficient way. NCTR will use base funding to conduct research to advance bioinformatics technologies, precision medicine, biomarkers, bio-imaging, and nanotechnology. This research will be done in collaboration with scientists from around the world in government,

academia, and industry to exchange views on how to develop, apply, and implement innovative methodologies into regulatory assessments.

BUDGET AUTHORITY

Food Safety: $7.2 million (-$3.054 million)

Center: -$3.054 million

As part of the FY 2017 Budget, NCTR will delay advances in science needed for regulatory decisions and scale back investment in new research areas critical to public health.

Business and academia are moving rapidly to take advantage of new technology and scientific understanding, and FDA must keep pace to fulfill its mission to protect the public. Without maintaining a level budget for research, FDA's ability to translate the science required for regulatory decision-making will be slowed in select areas.

PERFORMANCE

NCTR's performance measures focus on research to advance the safety of FDA-regulated products, on developing a strong FDA science base for emerging technologies, and on providing personalized medicine solutions in order to protect and improve the health of the American public as detailed in the following table.

Measure	Most Recent Result / Target for Recent Result	FY 2016 Target	FY 2017 Target
263103: Conduct translational and regulatory research to advance the safety of products that FDA regulates *(Output)*	FY15: Research demonstrated that silver nanoparticles can reach the bone marrow and liver, and result in cellular toxicity when using an animal model*(Target Met)* FY15: Expression levels of 61 genes were significantly altered in heart mitochondria before the occurrence of heart damage, suggesting these genes could be used as early biomarkers of cardiotoxicity *(Target Met)*	Experimental data generated to demonstrate the advantages and benefits of new in vitro method to rapidly and accurately detect cellular toxicity	1) Finalize research to validate a minimally invasive 3-dimensional MRI technique to more accurately evaluate brain neurotoxicity 2) Report preliminary findings on the neurological effects of commonly used chemotherapy drugs doxorubicin and cyclophosphamide
263201: Develop science base for supporting FDA regulatory review of new and emerging technologies *(Output)*	FY15: Paper published outlining the benefits of in vitro approaches (e.g. neural stem cells) in combination with imaging approaches (e.g. calcium imaging) *(Target Met)*	Provide data that can inform FDA's regulatory need concerning sevoflurane and propofol use in children	1) Provide data on the toxicity of graphene nanomaterials leading to guidance for FDA-regulation of nanomaterials 2) Identify and validate predictive biomarkers for nanomaterial-associated immunotoxicity

Measure	Most Recent Result / Target for Recent Result	FY 2016 Target	FY 2017 Target
262401: Develop biomarkers to assist in characterizing an individual's genetic profile in order to minimize adverse events and maximize therapeutic care *(Output)*	FY15: Research generated a mutational profile of Triple Negative Breast cancer to aid in personalized medicine approaches to treat breast cancer *(Target Met)* FY15: Initial evaluation of biomarkers completed via Nuclear Magnetic Resonance *(Target Met)*	Identify potentially predictable drug/drug receptor combinations that can cause rare and unpredictable side effects	Complete initial phase of research to Identify drugs that have differential toxicological effects depending on age and/or sex of an individual in an effort to develop a bioinformatics-based safety assessment
264101: Develop risk assessment methods and build biological dose-response models in support of food protection *(Output)*	FY15: Researchers identified emerging strains of E. coli that can cause foodborne outbreaks in humans and could potentially be used as agents in a bioterrorism event *(Target Met)*	Data analysis completed on study to enhance immunity to norovirus-like particle vaccine	Develop bioinformatics methods in support of microbial pathogen characterization and food protection
263104: Use new omics technologies to develop approaches that assess risk and assure the safety of products that FDA regulates *(Output)*	FY15: A potential biomarker of impending neuronal damage has been discovered when using an animal model*(Target Met)*	Utilize new omics technologies to provide translational insight into prevention and prognosis of drug induced liver injury	Finalize research to identify translational biomarkers to aid in prevention and/or early detection of Drug Induced Liver Injury induced by FDA-regulated products
263102: Develop computer-based models and infrastructure to predict the health risk of biologically active products *(Output)*	FY15: Developed a strategy for potentially identifying drug-repurposing candidates for Cystic Fibrosis patients using a bioinformatics approach *(Target Met)*	Statistical and data mining techniques identified for use in application to cancer therapeutics	Develop and refine FDA Label with new functionality based on feedback from FDA reviewers and scientists

The following selected items highlight notable results and trends detailed in the performance table.

- research to advance the safety of FDA-regulated products
- strong FDA science-base for emerging technologies
- precision medicine solutions

Advance the Safety of FDA-Regulated Products

NCTR scientists have extended their original findings on the pediatric anesthetics ketamine, isoflurane, and nitrous oxide to include propofol and sevoflurane. Initial research indicated that certain concentrations of propofol had adverse effects.

However, scientists also found that administration of the drug, acetyl-L-carnitine, provides some protection to the nervous system when given prior to and during administration of anesthetics. In FY 2015, a paper outlining the benefits of in vitro approaches (e.g. neural stem cells) in combination with imaging approaches (e.g. calcium imaging) was published. In FY 2016,

scientists at NCTR will research new *in vitro* methods to rapidly and accurately detect damage to cells that is caused by exposure to FDA-regulated products.

Develop Science Base for New and Emerging Technologies
Results from studies exploring miRNA (unique genetic markers found in higher-level organisms) responses in humans with liver injury, suggest that miRNAs might provide needed information to industry and to clinicians managing patients who experience drug-induced injury. In FY 2015, scientists developed a strategy for potentially identifying drug-repurposing candidates for Cystic Fibrosis patients using a bioinformatics approach. In FY 2016, NCTR scientists will provide data to address FDA inquiries regarding use of the anesthetics sevoflurane and propofol in children.

Personalized Medicine
Investigators determined that sex differences, and ethnicity and age influenced gene-expression levels in normal kidney tissue. Investigators also identified genetic variations that increase the risk of adverse reactions to carbamazepine, a drug used to treat epilepsy. Preliminary results revealed that two genetic markers, in particular, are highly associated with adverse drug reactions. In FY 2015, researchers generated a mutational profile of Triple Negative Breast cancer to aide in personalized medicine approaches to treat breast cancer. In FY 2016, NCTR will perform research to identify combinations of drugs and drug receptors (any part of a cell with which a drug interacts to trigger a response or effect) that may lead to adverse patient side effects.

PROGRAM ACTIVITY DATA

National Center for Toxicological Research Program Activity Data (PAD)

Program Workload and Outputs	FY 2015 Actual	FY 2016 Estimate	FY 2017 Estimate
Research Outputs			
Research Publications	141	150	155
Research Presentations	160	148	148
Patents (Industry)	5	5	5
Leveraged Research			
Federal Agencies (Interagency Agreements)	3	3	3
Nongovernmental Organizations	19	19	19
Active Research Projects	180	165	155

OFFICE OF REGULATORY AFFAIRS – FIELD ACTIVITIES

(Dollars in Thousands)	FY 2015 Final	FY 2015 Actuals	FY 2016 Enacted	FY 2017 President's Budget	FY 2017 +/- FY 2016
Office of Regulatory Affairs	**1,049,021**	**998,913**	**1,124,401**	**1,274,999**	**150,598**
Budget Authority	***934,454***	***934,393***	***1,008,024***	***1,033,739***	***25,715***
User Fees	***114,567***	***64,520***	***116,377***	***241,260***	***124,883***
Prescription Drug (PDUFA)	*16,263*	*8,612*	*14,360*	*14,584*	*224*
Medical Device (MDUFA)	*2,105*	*2,142*	*2,416*	*2,553*	*137*
Generic Drug (GDUFA)	*54,083*	*34,180*	*55,167*	*56,158*	*991*
Biosimilars (BsUFA)	*1,348*	---	*1,382*	*1,416*	*34*
Animal Drug (ADUFA)	*404*	*31*	*411*	*414*	*3*
Animal Generic Drug (AGDUFA)	*186*	---	*259*	*277*	*18*
Family Smoking Prevention and Tobacco Control Act	*15,887*	*9,470*	*16,663*	*14,900*	*-1,763*
Mammography Quality Standards Act (MQSA)	*13,339*	*10,085*	*13,612*	*13,892*	*280*
Food and Feed Recall	*1,000*	---	*1,000*	*1,000*	---
Food Reinspection	*5,382*	---	*5,382*	*5,382*	---
Voluntary Qualified Importer Program	*4,320*	---	*4,320*	*4,320*	---
Third Party Auditor Program	---	---	*1,141*	*1,141*	---
Outsourcing Facility	*250*	---	*264*	*277*	*13*
Food Facility Registration and Inspection	---	---	---	*28,949*	*28,949*
Food Import	---	---	---	*86,122*	*86,122*
International Courier	---	---	---	*5,201*	*5,201*
Cosmetics	---	---	---	*4,674*	*4,674*
FTE	**4,807**	**4,776**	**5,005**	**5,137**	**132**

Authorizing Legislation: Filled Milk Act (21 U.S.C. §§ 61-63); Federal Meat Inspection Act (21 U.S.C. § 679(b)); Federal Import Milk Act (21 U.S.C. § 141, et seq.); Federal Food, Drug, and Cosmetic Act (21 U.S.C. § 301, et seq.); The Office of Criminal Investigations (OCI) of ORA conducts criminal investigations and executes search warrants as permitted by the Federal Food, Drug, and Cosmetic Act (21 U.S.C. 372), the Public Health Service Act (42 U.S.C. 262) and the Federal Anti-Tampering Act (18 U.S.C. 1365); Poultry Products Inspection Act (21 U.S.C. § 467f(b)); Small Business Act (15 U.S.C. § 638); The Fair Packaging and Labeling Act (15 U.S.C. 1451, et seq.); Executive Order 11490, § 1103; Comprehensive Drug Abuse Prevention and Control Act of 1970 (84 Stat. 1241); Controlled Substances Act (21 U.S.C. § 801, et seq.); Lead-Based Paint Poisoning Prevention Act (42 U.S.C. § 4831(a)); Federal Advisory Committee Act (5 U.S.C. Appx. 2); Federal Caustic Poison Act (44 Stat. 1406); Egg Products Inspection Act (21 U.S.C. § 1031, et seq.); Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. § 3701, et seq.) and Executive Order 12591; Equal Access to Justice Act (5 U.S.C. § 504); Consumer-Patient Radiation Health and Safety Act of 1981 (42 U.S.C. §§ 10007 and 10008); Patent Term Extension (35 U.S.C. § 156); Pesticide Monitoring Improvements Act of 1988 (21 U.S.C. §§ 1401-1403); Food, Agriculture, Conservation, and Trade Act of 1990 (7 U.S.C. §138a); Effective Medication Guides of the Agriculture, Rural Development, Food and Drug Administration (FDA), and Related Agencies Appropriations Act of 1997 (Public Law 104-180); Best Pharmaceuticals for Children Act (Public Law 107-108), as amended by Pediatric Research Equity Act of 2003 (Section 3(b)(2) of Public Law 108-155); and Drug Quality and Security Act of 2013.

Allocation Methods: Direct Federal/Intramural

PROGRAM DESCRIPTION AND ACCOMPLISHMENTS

The Office of Regulatory Affairs (ORA) advances FDA's mission to protect public health by conducting field operational activities to ensure the safety, effectiveness, and quality of a wide range of products accounting for about 20 cents of every dollar consumers spend in the United States. These activities are conducted in support of each of the FDA Centers and help to provide

awareness, surveillance, and enforcement of FDA regulations related to our nation's food supply, human and veterinary drugs, vaccines, blood products, medical devices, cosmetics, dietary supplements, tobacco products, and products that give off radiation.

ORA is responsible for a wide range of mission critical activities involving FDA-regulated products and manufacturing facilities, including:

- inspections and investigations (including criminal investigations)
- sample collection and analyses
- screening FDA-regulated products offered for import into the United States
- responding to emergencies
- executing recalls and other enforcement activities
- responding to consumer complaints.

ORA has staff in 227 offices across 49 states, including the U.S. Virgin Islands and the Commonwealth of Puerto Rico and has staff both temporarily and permanently assigned to foreign posts. ORA manages 13 scientific laboratories that conduct applied research and perform highly specialized analyses of domestic and imported products. In addition, ORA also funds state, local, tribal, and territorial regulatory jurisdictions to conduct inspections, collect samples, advance conformance with national regulatory program standards, and enhance program capacity and infrastructure.

Recent Accomplishments

Three of ORA's most significant accomplishments from the past year are as follows.

National Integrated Food Safety System (NIFSS)

FDA is committed to a fully integrated national food safety system, a hallmark component of the Food Safety and Modernization Act (FSMA). The NIFSS is accomplished through the development and implementation of standards, and the use of contracts, grants, and cooperative agreements with key federal, state, local, tribal, and territorial regulatory and public health partners, as well as with key industry and state associations. ORA continues its involvement in developing and implementing the necessary rules, standards, outreach, and training to help ensure quality and consistency across the system.

Extending FDA's Global Presence

ORA maintains cadres of investigators to conduct foreign inspections in the food, drug, and device program areas. ORA collaborates with its international counterparts to converge international standards and leverage resources. FDA introduced several programs to involve international stakeholders in the regulation of the global supply chain.

Focus on Pharmacy Compounding

FDA is implementing the compounding provisions of the Federal Food, Drug, and Cosmetic Act (FD&C Act), including those added by the Drug Quality and Security Act (DQSA). ORA increased inspections of compounders and takes regulatory action when warranted to prevent further potential outbreaks caused by contamination in the compounding process.

Enhance Oversight

Risk-Related Preventive Focus

ORA has strengthened the surveillance and compliance programs used to monitor FDA-regulated products by enhancing strategies that focus on high-risk products and by focusing on

preventive approaches with regulated industry. FSMA outlines this new approach to food safety that is risk-informed and preventive in focus. In partnership with the Office of Food and Veterinary Medicine (OFVM), ORA is building functional preventive measures across the food system platform, creating a comprehensive regulatory framework for prevention, and strengthening FDA's inspection, compliance, imports review, sampling, and outbreak response tools.

Working with the Centers, ORA uses the risk-based approach to target firms to inspect, enabling ORA to focus its on-site inspections of the highest-risk facilities and industries. ORA is actively advocating for enhanced partnerships with federal, state, local, tribal, and territorial public health regulatory partners. The strengthening of the domestic network of regulators permits ORA to apply its highly-skilled staff of investigators to focus on the areas of regulation that pose the highest risk to the American public, including the growing supply of products introduced into the United States from the global marketplace.

Sampling approaches have also changed to help the Agency to better understand risks, assess the value of strategies to control those risks, and prevent contaminated product from reaching consumers. FDA has created a new sampling approach that is not only surveillance or compliance based, but also serves as a mechanism to actively identify risks and when possible, identify areas where preventive controls should be put into place to better protect public health. As FDA increases its understanding of the sources of contamination in high-risk commodities and practices, it can more effectively allocate resources to address public health risks through targeted sampling and other risk mitigation strategies.

NIFSS and Program Standardization

FDA prioritizes its inspectional efforts in coverage of the highest-risk products, facilities, and global marketplace. Therefore, it must rely greatly on the strength and capability of federal, state, local, tribal, and territorial public health regulatory partners through contracts and grants to provide much of the domestic surveillance. This reliance allows FDA to share the responsibility and cost of protecting the American food supply with many of its domestic public health regulatory partners. However, there must be steps taken to ensure uniformity in the regulation and approach taken by each of the FDA's partners.

To meet the responsibilities enacted by FSMA, FDA has made significant investments in the development of NIFSS. In order to ensure successful implementation of the NIFSS, FDA has worked closely with its partners to develop guidance, rules, and standards which will help provide framework to the regulation these partners provide in FDA's stead. This framework will continue to grow and will be tested and enhanced through training and continual improvement.

In FY 2015, FDA expanded partnerships with several national public health regulatory organizations, and promoted widespread participation in the national regulatory program standards. Food contracts represent 98 percent of the domestic manufactured food regulatory program and Manufactured Food Regulatory Program Standards (MFRPS) have been instituted to refine the efforts conducted under this program. In partnership with the Association of Food and Drug Officials (AFDO), a MFRP Alliance has been implemented to provide recommendations for improving and maintaining the MFRPS and manufactured food regulatory programs within an integrated food safety system. Animal Feed Regulatory Program Standards (AFRPS) were released in 2014 in collaboration with the American Association of Feed Control Officials (AAFCO). ORA has since developed a cooperative agreement program to promote

state implementation of the AFRPS, resulting in 21 state programs enrolled. This development is significant since currently the state regulatory agencies complete approximately 80 percent of the FDA animal feed work plan. Additionally, Voluntary National Retail Food Regulatory Program Standards (VNRFRPS) have been developed and ORA has steadily increased funding in this program resulting in 671 state, local, tribal, and territorial regulatory programs enrolled in the VNRFRPS as of October 2015.

ORA continues to build and enhance the capacity of state public health regulatory agencies to contribute to domestic oversight by funding their performance of surveillance inspections, including verification of compliance with hazard-based preventative controls and other applicable standards. FDA works with the Partnership for Food Protection (PFP) in a collaborative effort with fellow public health regulatory partners to:

- create national standards for inspections;
- improve coverage of domestic food facilities;
- develop training and certification programs;
- improve recall and response effectiveness;
- increase collaborative efforts; and
- promote the Integrated National Food Safety System.

Mitigating Significant Increases in Import Entry

IMPORT LINES BY PROGRAM AREA
FY2011-FY2017 (Est.)

Program Area	2011	2012	2013	2014	2015	2015 Percent Growth*	2015 Percent of Total Lines	Estimate 2016	Estimate 2017
Foods	10,167,887	10,805,094	11,502,065	12,180,223	13,080,429	5%	37.87%	13,718,926	14,388,591
Cosmetics	2,121,088	2,349,615	2,433,747	2,596,057	2,930,682	6%	8.49%	3,111,524	3,303,525
Human Drugs	477,818	592,591	590,079	641,908	688,208	7%	1.99%	734,654	784,234
Animal Drugs & Feeds	284,973	331,505	368,447	391,388	416,860	7%	1.21%	446,903	479,111
Biologics	53,731	65,469	74,402	82,710	150,673	17%	0.44%	176,313	206,317
Medical Devices & Rad Health	9,584,415	13,651,985	14,320,961	16,668,422	17,252,283	10%	49.95%	19,044,228	21,022,297
Tobacco Products	13,258	17,757	19,316	20,161	16,680	3%	0.05%	17,238	17,815
Total	22,703,170	27,814,016	29,309,017	32,580,869	34,535,815	8%	100.00%	37,249,787	40,201,890

Over the last decade, there has been a very significant increase in FDA-regulated products introduced for import into the U.S. market. While such vast growth has been difficult to match with available resources, FDA has made several advancements in how imported products are targeted and processed for entry.

ORA works in partnership with the U.S. Customs and Border Protection (CBP) and the Commercial Operations Advisory Committee (COAC) in an effort to improve and streamline the import process which will help to expedite the release of compliant products. COAC is a 20 member council that meets quarterly and advises government agencies on the commercial operations of CBP and related functions, taking into consideration issues such as:

- global supply chain security and facilitation
- CBP modernization and automation
- air cargo security
- customs broker regulations
- trade enforcement
- U.S. government approach to trade and safety of imports
- agriculture inspection
- protection of intellectual property rights.

FDA has collaborated with CBP and the International Trade Data System (ITDS) Board of Directors to establish a fully electronic Automated Commercial Environment (ACE) as the "single-window portal" through which to import goods into the U.S. To facilitate entry via ACE, FDA developed "FDA Supplemental Guidance for the Automated Commercial Environment/International Trade Data System Data" which provides commodity-specific data elements needed to submit entries for import into the U.S. To date there have been multiple entries filed through the ACE system. Import entries submitted through ACE continue to increase along with filers, products, and expansion of ports.

FDA has implemented line-level release in its automated import entry review system. An import entry may include one or more products and each product must be listed as a separate line item in the entry. Previously, if any one line of a multi-line entry was held for any reason, the entire entry would be held. By implementing line-level release, there has been a reduction of entry lines designated for review and enhanced processing of entries. An initial review of these results shows a dramatic shift reducing these entry lines designated for review on average by more than 31,000 lines per day allowing substantial resources to be directed to higher-risk work.

FDA is also implementing a rule in International Mail Facilities nationwide which will institute the "Administrative Destruction of Certain Drugs Refused Admission to the United States." On September 15, 2015, this final rule for FDA Safety and Innovation Act section 708 was published in the *Federal Register*. The authority under this rule allows FDA to destroy, without the opportunity for export, drugs refused for admission that are valued at $2,500 or less with due process prior to the destruction. ORA is developing the necessary operational and information technology system changes to fully implement this authority. This authority will help avoid the re-introduction of violative products and deter the entry of unsafe drugs going directly to consumers.

Cultivating a Global Regulatory Network

FDA continues to increase its regulatory presence globally to ensure that the food, feed, and medical products available in the United States meet U.S. regulatory requirements. FDA fosters this global product safety net by leveraging and collaborating with domestic and foreign partners. Through enhancing existing partnerships and encouraging new partnerships and cross-agency coalitions, ORA improves and increases information sharing, joint work planning and compliance collaborations with federal, international, and state public health regulatory partners. FDA has formed partnerships with various stakeholders to leverage resources to oversee FDA-regulated products and has developed technologies that streamline redundant processes and enhance inspectional capacity.

Under FSMA, ORA is also working on the implementation of the Foreign Supplier Verification Program (FSVP) and the Voluntary Qualified Importer Program (VQIP). The FSVP regulation

specifically requires U.S. food importers to develop, maintain, and follow a program that verifies that their foreign suppliers have established adequate preventive controls and that the human and/or animal food(s) produced within the foreign supplier's facility are in compliance with the FD&C Act. VQIP is a formal voluntary program under which importers of food may submit evidence of regulatory compliance and safety controls in return for the facilitated entry of import entries into the United States.

During FY 2015, ORA collaborated with OFVM to finalize an important VQIP guidance document, "Draft Guidance for Industry: FDA's Voluntary Qualified Importer Program." This document provided guidance on the benefits VQIP importers can expect to receive, the eligibility criteria for VQIP participation, instructions for completing a VQIP application, conditions that may result in revocation of participation in VQIP, and criteria for VQIP reinstatement following revocation.

ORA is actively involved in the Office of Global Regulatory Operations and Policy's efforts to establish a Mutual Reliance agreement with members of the European Union. ORA assisted in auditing the European Medicines Agency assessments and re-assessments of certain members of the EU. The Mutual Reliance efforts would enable sharing of inspection data and outcomes so that the inspectional resources of all parties could be shifted to higher-risk work.

ORA is participating in the Medical Device Single Audit Program (MDSAP) Pilot alongside four other foreign regulatory authorities. This program includes the use of third party auditors to provide FDA with additional information related to the compliance status of manufacturers, thus expanding FDA's knowledge of regulated industry. During the pilot, FDA is accepting the MDSAP audit reports as a substitute for routine FDA inspections. In implementing and assessing this pilot, FDA aims to have increased information with which to perform its risk-based work planning, allow for greater efficiency in FDA's use of resources, and provide broader understanding of regulated industry.

FDA is partnering with CBP in developing a trusted Trader Program designed to facilitate the importation process for selected firms. CBP issued a *Federal Register* Notice announcing a test program on June 16, 2014. FDA has reviewed the applicants and nine participants have been selected to participate. The pilot will begin after the applicants have been notified and CBP receives confirmation of the intent to participate.

ORA has also initiated a Secure Supply Chain Pilot Program (SSCPP), designed to enhance the security of imported drugs. The SSCPP allows pre-qualified companies who have been designated to take part in this two-year program to have expedited entry for the importation of up to five selected drug products into the United States. If successful, the expansion of this program will help expedite the admissibility process for pharmaceuticals originating from known sources with a validated secure supply chain protocol and a demonstrated ability to maintain control of their drugs from the time of manufacture abroad through entry into the United States.

Leveraging Laboratory Capabilities

ORA provides oversight of regulatory science standards in laboratories through the use of programs, systems, and cooperative agreements. FDA worked collaboratively with external partners, including states, foreign government regulatory authorities, and industry, to allow these stakeholders to provide input on these laboratory standards and on the identification of sampling assignments. This strategy has strengthened the surveillance of FDA-regulated food products by

gaining cooperation up front and allowing stakeholders to take part in the development of the assignments.

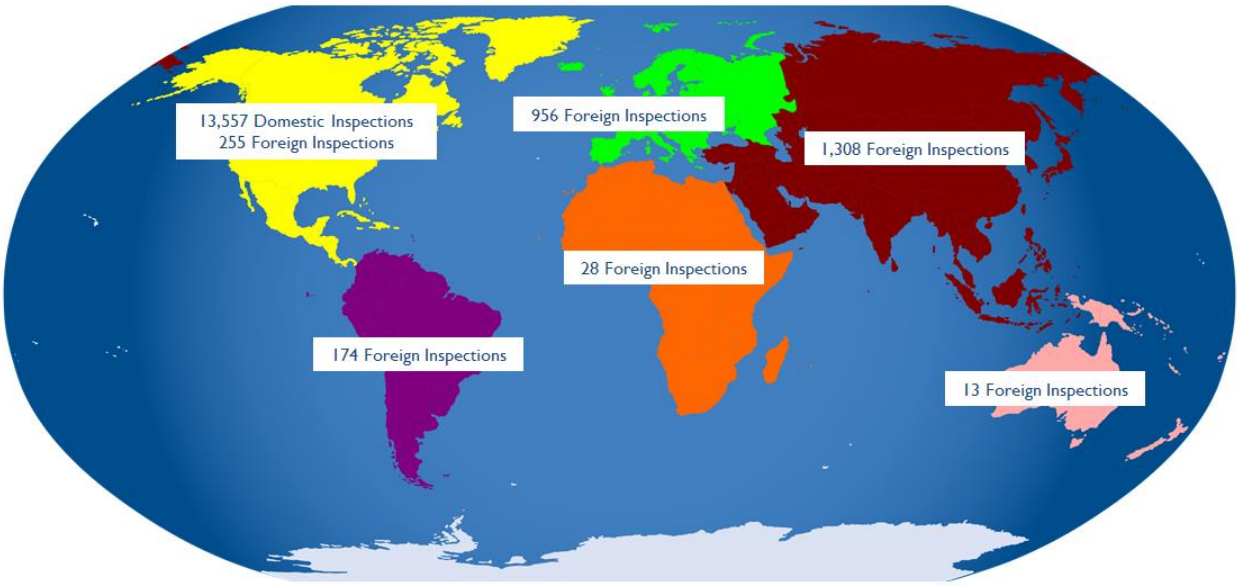
ORA also funds and manages Food Emergency Response Network (FERN) cooperative agreement programs designed to assist state laboratories with building their capability and capacity and demonstrating competency in FDA regulatory testing methodologies and reporting requirements. Throughout FY 2015, the FERN Microbiological Cooperative Agreement Program (mCAP) labs were involved in testing avocados for Salmonella and Listeria monocytogenes as part of a large-scale assignment. Positive results from FERN laboratories were shared with industry and as a result, recalls were conducted as appropriate.

ORA's Winchester Engineering and Analytical Center (WEAC) and FERN National Program Office (NPO) are also working together to start a FERN Radiological Proficiency Test program. This laboratory comparison study will allow FERN NPO and WEAC to gain information regarding the proficiencies of FERN Radiological CAP labs running various methodologies. This study will help to identify any analytical gaps or needs to be addressed before establishing a network of labs with a harmonized methodology base that can be prepared to respond in a coordinated fashion to any radiological emergency that occurs.

ORA is expanding its analytical repertoire by developing methods using cutting-edge technology to respond to public health needs. An outstanding example of ORA's scientific sophistication being leveraged to address an urgent public health issue is the response in FY 2014 and FY 2015 investigating the source of nontuberculous mycobacterium infections that were traced to a tattoo parlor. ORA worked with State regulatory partners to utilize a relatively newly integrated technology called Whole Genome Sequencing to perform sub-species level microbial identification of the organisms found in the samples. Working with State partners and exchanging genetic information, the cause of the infections was traced to inks used at the tattoo

parlor. The regulatory outcome was built on a solid scientific case that represented effective federal-state collaboration, communication, and utilization of new technology.

Surveillance of FDA-Regulated Products



FY 2014 FDA Inspections by Continent

ORA works with each Center to develop and implement a work plan that outlines assignments in more than 500 activity areas that span all of FDA's regulated commodities while maintaining flexibility to respond to unplanned activities, such as new product recalls, emergencies, and outbreaks that may arise, to ensure quick containment and mitigation. ORA accomplishes the FDA mission through a highly skilled professional and administrative staff including consumer safety officers (CSOs) or field investigators, compliance officers, laboratory analysts, recall staff, consumer complaint coordinators, criminal investigators, state cooperative program specialists, and many other critical staff functions nationwide.

FDA's foreign inspections are a critical component of protecting the health and safety of U.S. citizens. These inspections help to ensure that products produced in foreign countries intended for the U.S. market meet the same standards of quality, purity, potency, safety, and efficacy as those manufactured domestically.

The Agency continues to leverage the work of its dedicated foreign inspections cadre, FDA inspection staff located at FDA's foreign offices, and its domestic-based investigators to continue to enhance the overall coverage of the foreign establishment inventory. Through improvements to technology systems, FDA also continues to increase transparency and access to importers and other government agencies, helping to improve the efficiency of import entry reviews.

Protecting the U.S. food supply requires an integrated approach for identifying, investigating, and responding to foodborne illnesses and food-related incidents. This approach has improved response to mitigate the number of illnesses associated with incidents related to food products. ORA's investment in developing training and mobilization of joint ORA and state Rapid

Response Teams reduces exposure times, increases consumer protection, and minimizes the loss of consumer confidence, while lessening potential detrimental economic impact on industry.

In November 2013, President Obama signed the Drug Quality and Security Act (DQSA), legislation that contains important provisions relating to the oversight of compounding of human drugs. The DQSA created a new category of compounders called outsourcing facilities, which are subject to increased Federal oversight and quality standards, including inspections according to a risk-based schedule and current good manufacturing practice (CGMP) requirements. ORA is involved in the development and publication of several guidance documents to implement compounding provisions of the DQSA. In FY 2015, FDA estimates conducting 120 inspections, including 90 inspections of compounding pharmacies and 30 inspections of outsourcing facilities. In addition to the increased inspections of compounding pharmacies for cause, ORA leads the Compounding Training Subgroup.

Enforcement of FDA Authorities

ORA's Office of Criminal Investigations (OCI) has increased its international presence and, as part of these efforts, is working with Europol and Interpol to more effectively target those responsible for manufacturing and distributing violative FDA-regulated products. Starting in FY 2014, OCI embedded an agent at Europol, located in the Netherlands, to assist with international FDA cases with a connection to any of Europol's 28 member states. In FY 2015, OCI began working with Interpol to assign a Special Agent as a liaison officer at The Interpol Global Complex for Innovation (IGIC) in Singapore, to work with Interpol's Medical Products and Counterfeiting and Pharmaceutical Crime sub-directorate. The IGIC is a cutting-edge research and development facility used for the identification of crimes and criminals, innovative training, operational support and partnerships.

As part of Interpol's annual Operation Pangea, OCI's Cybercrime Investigations Unit coordinated externally with other foreign and domestic agencies, and internally with the FDA Pangea working group members. FDA's focus during Pangea was websites illegally selling medical devices and illegal online pharmacies and resulted in more than 2,400 websites being taken offline and the seizure of $81 million worth of potential dangerous illegal medicines and medical devices worldwide.

In December 2014, OCI entered into a Letter of Intent Agreement with the French National Gendarmerie to combat counterfeit drugs and other transnational crimes that affect the public health. This agreement provides for stronger collaboration between the United States and France, as well as enhancing operational support and the exchange of investigative information.

For the month of June 2015, OCI and the UK Medicines and Healthcare Products Regulatory Authority exchanged agents on detail to each other's headquarters units to promote education of agency missions and enhance coordination on current and future joint investigations.

Through FY 2015, OCI conducted several training sessions on cybercrime, counterfeit drugs, and drug diversion for foreign criminal law enforcement agencies in Canada, New Zealand, Mexico, Latin America, Central America, France, and Turkey.

Improve and Safeguard Access

ORA has taken steps to improve the predictability, consistency, transparency, and efficiency of its processes to benefit the health and wellness of the American public consumer with a focus on Safety and Quality.

Premarket Activities
Implementation of the Generic Drug User Fee Act (GDUFA) program commits FDA to prioritizing inspections of establishments not previously inspected and those that are associated with Abbreviated New Drug Applications (ANDAs) that are otherwise approvable or eligible for tentative approval except for an outstanding inspection. ORA collaborates with the Center for Drug Evaluation and Research (CDER) in prioritizing ANDA inspections, targeting inspectional resources, and creating efficiency by identifying generic drug manufacturing facilities for inspection to coincide with Center reviews of applications.

FDA committed to conducting risk-adjusted biennial current Good Manufacturing Practices (cGMP) surveillance inspections of human generic active pharmaceutical ingredient (API) and finished dose form (FDF) manufacturers, with the goal of achieving risk adjusted parity in domestic and foreign inspections by 2017. ORA continues to increase pre-approval and surveillance inspections to meet the GDUFA goals by the 2017 commitment.

ORA conducts bioresearch monitoring (BIMO) inspections of scientific research studies in support of marketing applications. In FY 2015, the first domestic and foreign BIMO inspections in support of a Modified Risk Tobacco Product Application (MRTPA) and their corresponding premarket tobacco product applications (PMTA) were conducted. The inspectional focus was on the products for which the modified risk and premarket tobacco product applications were submitted.

ORA continues to conduct inspections of tobacco manufacturing establishments covering labeling, advertising, understanding the manufacturing methods and testing, and ensuring the marketing of products is not geared towards youth. In combination with the BIMO inspections, ORA conducted manufacturing inspections in order to confirm the accuracy of the data and information provided in the application regarding manufacturing methodology, specifications, processes, testing, and controls, and to determine whether the formulation of the products can be consistently reproduced with the firm's established manufacturing controls.

Strengthen Organizational Excellence

ORA enhances program integrity through its commitment to operational, workforce, and organizational excellence. This investment includes recruiting, training, developing, and retaining a diverse, world class workforce, and the creation of leadership roadmaps to support professional development.

Workforce Development
FDA employees must be highly skilled and meet professional standards to carry out their responsibilities. ORA and key training partners will continue to develop, design, and deliver training to FDA's workforce, as well as to state and local partners, to ensure that regulators at every-level possess the scientific and technical competence and skills to oversee the diverse commodities over which FDA has jurisdiction.

ORA has developed plans for continuous improvement of training in alignment with Job Task Analysis results. Outcomes of these reviews include a major curriculum revamp for each program area, incorporating a blended learning approach and providing quality training in an efficient, timely and cost-effective manner. This training includes increased incorporation of web modules, webinars, and on-the-job training at the student's locality.

FDA is establishing additional investigator and analyst certification programs to institute professional standards for regulatory employees who execute the authority of FDA as defined in the FD&C Act and related acts. Programs already exist for Seafood, Shellfish, Low Acid Canned Foods/Acidified Foods (LACF/AF), Milk, Retail Food, Drug, Import, Medical Device, Clinical BIMO, Blood Bank and Plasma Center certifications. These certification programs provide a foundation to ensure highly skilled individuals are available to carry out FDA's mission.

The Management and Leadership Development Program (MLDP) offers training and development opportunities for all ORA staff, with an emphasis on those seeking a future management position or wanting to develop into a candidate better qualified for career advancement. The development of the ORA leadership pipeline continues to be a high priority. The purpose of the program is to provide a framework for moving forward with succession management in the effort to strengthen the leadership skills of employees at all levels.

Commitment to Quality
ORA is committed to quality and continual improvement. ORA's Quality Management System (QMS) responsibilities include providing centralized QMS guidance, leadership, communications, training, and collaboration with internal and external stakeholders. These efforts help to ensure that QMS is an effective, efficient, practical, and long-term system that provides feedback to ORA on the quality of its work and results in continual improvement for all of ORA's processes, products, and services.

In order to keep pace with the acceleration of scientific innovation, globalization, and recent legislative authorities, pending approval, FDA will be implementing a Program Alignment initiative that will result in organizational and operational changes to ensure that FDA achieves its mission-critical objectives and optimizes the coordination of the work performed among the Centers and ORA. A key part of this process is to enhance the specialization of ORA investigators. This enhancement of specialization will allow FDA to have more commodity-based expertise, training, and better tools for ensuring that FDA's oversight is risk-based, efficient, effective, and results in consistent, public health focused decision making. Numerous transitional activities related to Program Alignment will be occurring during FY 2016, with full implementation, pending approval, expected in FY 2017.

FUNDING HISTORY

Fiscal Year	Program Level	Budget Authority	User Fees
FY 2013 Actual	$874,601,000	$830,219,000	$44,382,000
FY 2014 Actual	$962,111,000	$917,317,000	$44,794,000
FY 2015 Actual	$998,913,000	$934,393,000	$64,520 ,000
FY 2016 Enacted	$1,124,401,000	$1,008,024,000	$116,377,000
FY 2017 President's Budget	$1,274,999,000	$1,033,739,000	$241,260,000

BUDGET REQUEST

The FY 2017 Budget Request is $1,274,999,000, of which $1,033,739,000 is budget authority and $241,260,000 is user fees. The budget authority increases by $25,715,000 compared to the FY 2016 Enacted level and user fees increase by $124,883,000. The FY 2017 President's budget allows FDA to continue to ensure that food, feed, and medical products are available to the American public are safe and effective.

The FY 2017 Budget will allow FDA to accomplish its mission through ORA, managing a network of investigators and lab analysts that will conduct all of FDA's:

- field inspections
- investigations (including criminal)
- exams
- sample collections
- lab analysis
- enforcement activities
- import operations to screen all FDA-regulated products offered for import into the United States.

These activities, in coordination with the efforts of the six Product Centers, help ensure the adherence to laws that protect and advance public health.

In FY 2017, ORA will continue to lead field activities in each of FDA's six product areas to uphold oversight of the safety and quality of FDA-regulated products and advance public health. ORA will maintain levels of operational activities to inspect regulated products and manufacturers, conduct sample analyses of regulated products, and reviews of imported products offered for entry into the United States. As part of an ongoing commitment to quality and continual improvement, ORA will further hone utilization of risk-based approaches of regulatory activities to make best use of available resources. Additionally, ORA will continue to work with its state, local, tribal, territorial, and foreign counterparts as applicable to further leverage, collaborate, and standardize the oversight of FDA-regulated products throughout the global marketplace.

In support of the Food and Veterinary Medicine programs, ORA will continue stewardship of its resources to institute smart regulation of food and animal feed products available for use by the American public. ORA will continue to conduct field operational activities on a surveillance and for-cause basis in oversight of these products offered from the domestic and global marketplace using proven standards and regulatory science to ensure safety and quality. ORA will continue to invest in state regulatory and public health systems through contracts, grants, cooperative agreements, and partnerships.

In support of the Medical Product programs, ORA will continue stewardship of its resources to institute smart regulation of human drug, animal drug, biologic, medical device, and radiological health products available for use by the American public. ORA will continue to conduct field operational activities on a surveillance and for-cause basis in oversight of these products offered from the domestic and global marketplace using proven standards and regulatory science to ensure safety and quality. Additionally, ORA will maintain regulatory activities instrumental to the review and approval of new medical products to safeguard the American public's improved access to innovative new products.

At the President's budget level, ORA will prioritize resources in order to protect consumers and enhance public health by maximizing compliance of FDA-regulated products and minimizing risk associated with these products. This focus will continue to best serve the advancement and protection of public health and allow ORA to respond to any public health emergencies or outbreaks that arise during the fiscal year by diverting resources from other regulatory activities that pose the lowest impact on risk to public health. However, without additional resources, it will be difficult for ORA to meet the challenges posed by the increasing globalization of the supply chain of FDA-regulated products as well as assume the new responsibilities and authorities in the public health arena, such as the Drug Quality and Security Act (DQSA); the FDA Safety and Innovation Act (FDASIA); and the FDA Food Safety Modernization Act (FSMA).

BUDGET AUTHORITY

Food Safety: $770.4 million (+ $25.3 million)

National Integrated Food Safety System (NIFSS): +$11.3 million
Foods: +$11.3 million

Building the NIFSS is a central element of FSMA's mandate to FDA and crucial to successful implementation of FSMA. The FY 2017 request will build on the FY 2016 investments in this area. The additional funds for NIFSS will contribute to the enhancement of ORA's ability to ensure that the NIFSS cooperative agreements and grants are continued and expanded, as well as provide additional investments in modernization of inspections and training of FDA investigators. In addition, the funds will build the state capacity to coordinate with FDA as a central tenet of FSMA by conducting:

- investigator training
- investigator certification programs
- state laboratory coordination
- and by increasing the capacity to share information with the states as it relates to FDA's new inspection and compliance approach.

Additional funding in these areas is essential to be successful in aligning state programs with FDA's new inspection and compliance approach.

The requested funding will also support states in carrying out facility inspections to implement the human and animal food preventive controls and produce rule. States currently conduct more than half of the domestic food and feed facility inspections required by FSMA. To ensure both effectiveness and efficiency, FDA expects that states will continue or increase the number of inspections they conduct as FDA transitions to prevention-oriented inspections or new oversight of produce operations to determine industry compliance with the new FSMA standards and rules.

Import Safety – Foreign Supplier Verification Program (FSVP) Implementation: +$14.0 million
Foods: +$14.0 million

The requested funds will enable FDA to implement the multifaceted new import safety system mandated by Congress.

FDA will continue implementing the FSVP rule. Under FSVP, importers must verify that food imported into the United States has been produced consistent with FSMA's new standards for

produce safety and preventive controls in food facilities. This preventive approach to import safety presents an enormous challenge for both FDA and food importers, given that approximately 90,000 consignees received food shipments in FY 2015.

Building on the FY 2016 investment, FSVP will require further investment to hire and train staff to perform FSVP inspections, provide extensive training and technical assistance for importers, and provide outreach to foreign firms and foreign government partners on the new FSVP requirements. To improve import safety, FDA will also expand its overseas presence, as mandated by FSMA. This expansion in FDA's international presence includes increasing and better targeting FDA inspections of foreign food facilities, as well as working with and assisting foreign governments in better ensuring the safety of food before it is exported to the United States.

ORA will further its work on the implementation of the FSVP to conduct risk-based foreign supplier verification activities to verify that imported food is not adulterated and was produced in compliance with FDA's preventive controls requirements and product safety standards. Implementation of FSVP requires a substantial regulatory development process involving staffing and training within FDA to enforce the regulation, and also extensive training and technical assistance for importers.

The food and feed industry has expressed significant concern that FDA's ability to screen food and feed imports is currently an impediment to the smooth flow of trade, and that without the means to make FSVP implementation successful, FDA's efforts could become a major barrier to trade. Already, the agency receives thousands of inquiries each year from importers to resolve problems at the border ports, to which it cannot adequately respond. A poorly implemented FSVP regulation could be expected to expand that problem.

Medical Product Safety and Availability: $263.4 million (+$0.44 million)

Compounding: +0.44 million
Human Drugs: +$0.44

The requested FY 2017 funding will allow FDA to improve oversight of human drug compounding through increased inspection and enforcement activities, policy development and implementation, and state collaboration and coordination. Increased efforts in these areas will help to prevent outbreaks that could result in deaths of or injuries to patients who receive compounded drugs.

FDA will continue to support inspections of compounding pharmacies under section 503A of the Food, Drug, and Cosmetic Act, and outsourcing facilities under section 503B. FDA will require direct inspection resources as well as significant resources to support these inspections. FDA's budget request for compounding is critical to uphold its mission of promoting and protecting public health.

USER FEES

Current Law User Fees: -$0.06 million

The FY 2017 request includes a decrease of $0.06 million for current law user fees. The net decrease is due to an adjustment to projected Tobacco Control Act field activities. This decrease offsets the $1.7 million increase requested in the remaining current law user fees. FY 2017

current law user fees will allow FDA to fulfill its mission of protecting the public health, treating and curing diseases, and accelerating innovation in the industry.

Proposed User Fees: +$125.0 million

Proposed Food Import Fee: +$86.1 million
Foods: +$86.1 million

The Field Foods Program request for the proposed Food Import Fee is $86,122,000. With this funding request, ORA will provide outreach and education on FSMA import provisions to all stakeholders, including the import community and other federal agencies involved in the import process. FDA will establish and implement a national call center, aimed at improving responsiveness to inquiries concerning the import process or the status of imported foods. The call center will help meet FSMA requirements for industry assistance, improve overall compliance with FSMA rules, and reduce time to solve problems. FDA will implement a quality management system and quality control measures for the import review process at all locations while providing dedicated quality management measures to assess and assure the consistency of the import review process.

FDA will expand import staffing by strategically applying increased hours of operations at specified border stations and ports of entry. Expanding hours and increasing staff will provide increased capacity for screening of shipments for food safety. This will enable FDA to:

- increase operational efficiency
- improve industry and FDA communication
- reduce time to resolve problems, and
- improve movement of trade through greater availability of knowledgeable FDA staff.

Improving information technology to enhance risk-based decision-making for import personnel will result in a higher percentage of unauthorized imports from crossing the U.S. borders. These enhanced IT tools, systems, and infrastructure will allow FDA to improve and expedite the identification of threats to public health and reduce the incidence of foodborne illness outbreaks. With this user fee, FDA will implement systems and IT changes to improve the consistency, predictability, and speed of the import review process by working with industry to enhance the quality of data FDA receives. This investment will also allow for the development of FDA's fee collection system.

Proposed Food Facility Registration and Inspection User Fee: +$29.0 million
Foods: +$27.9 million / Animal Drugs and Feeds: +$1.1 million

This user fee will allow FDA to continue development and implementation of an integrated national food safety system built on uniform regulatory program standards, strong oversight of the food supply, and sustainable multi-year infrastructure investments to provide more uniform coverage and safety oversight of the food supply. This investment will also improve FDA's ability to learn from outbreaks and other food safety incidents and thereby improve future prevention efforts. This funding will support FDA's ability to enforce mandatory recall authority and respond immediately when a food company fails to voluntarily recall unsafe food.

ORA will continue to assist the states in the implementation of the Manufactured Food Regulatory Program Standards (MFRPS) and the Animal Feed Regulatory Program Standards

(AFRPS), as well as provide support and coordinate with the states as FDA moves towards establishing national standards for laboratories.

FDA will work with government and industry partners to develop new trace-back tools and new systems that unify information received from FDA regulatory partners and private industry. Additional resources will be provided to ensure programmatic objectives and implementations of the NIFSS are coordinated and provide support for the governance structure. ORA will develop and validate certification testing instruments, serve as OEI Coordinators for FDA, and support the states as FDA moves to national standards for laboratories. FDA will implement and enforce preventative controls in food processing facilities, and begin training more than 3,400 (1,100 FDA and 2,300 state) inspectional personnel in preventive controls inspections and enforcement methods. This training will ensure that inspectional personnel are prepared to conduct sound, effective inspections in the new preventive controls framework. FDA will expand the program to also train foreign regulators, third party, and industry representatives in preventative controls and other FSMA policies.

Proposed Cosmetics Safety User Fee: +$4.7 million
Foods: +$4.7 million

FDA will use user fee funds to establish a Mandatory Cosmetic Registration Program (MCRP) that will require all domestic and foreign cosmetic labelers marketing products in the U.S. to register their establishments and products with FDA. FDA will provide information gathered from the complete listing of marketed cosmetic products and their ingredients to industry to assist it in its safety evaluations and product modifications. The user fees will also enable FDA to meaningfully participate in international harmonization efforts for cosmetic standards. With this investment, FDA will refine inspection and sampling of imported products and apply risk-based approaches to postmarket monitoring of domestic and imported products, inspection, and other enforcement activities. As a result, FDA will be better positioned to fulfill its public health mission and will promote greater safety and understanding of cosmetic products consumers regularly use.

Proposed International Courier User Fee: +$5.2 million
Foods: +$0.8 million, Human Drugs: +$0.5, Devices +$3.9 million

Millions of shipments of food and medical product commodities enter the United States through express courier facilities, and the number continues to grow. These shipments are often destined for individual consumers or for illegal distribution. The user fee resources for this activity will allow increased import surveillance of FDA regulated products at express courier hubs.

Current FDA staffing does not match the expected growth in import volume. Federal Express and other couriers have indicated that they expect a growth of over 60 percent in shipments during the next year, further taxing FDA resources. To address the growing volume of imports entering through international couriers, FDA is proposing to pay the cost of these import operations through a new user fee.

With this new user fee, FDA will:

- conduct entry reviews
- sample collections and physical exams to determine product admissibility into the United States
- initiate compliance actions to prevent release of unsafe products into U.S. commerce

- establish import controls to prevent future unsafe products from entering U.S. commerce.

PERFORMANCE

ORA's performance measures focus on import screening activities, laboratory capacity, and domestic and foreign inspections in order to ensure that food, feed and medical products available to the American public are safe and effective, as detailed in the following table.

Measure	Year and Most Recent Result / Target for Recent Result (Summary of Result)	FY 2016 Target	FY 2017 Target	FY 2017 +/- FY 2016
214201: Number of prior notice import security reviews. *(Output)*	FY 2015: 80,990 Target: 80,000 (Target Exceeded)	80,000	80,000	maintain
214202: Number of import food field exams. *(Output)*	FY 2015: 174,432 Target: 160,000 (Target Exceeded)	160,000	160,000	maintain
214203: Number of Filer Evaluations. (Output)	FY 2015: 1,212 Target: 1,000 (Target Exceeded)	1,000	1,000	maintain
214204: Number of examinations of FDA refused entries. *(Output)*	FY 2015: 8,527 Target: 7,000 (Target Exceeded)	7,000	7,000	maintain
214206: Maintain accreditation for ORA labs. *(Outcome)*	FY 2015: 13 labs Target: 13 labs (Target Met)	13 labs	13 labs	maintain
214209: As required by the FSMA Legislation, cover 100% of the High Risk domestic inventory (approximately 19,500 firms) every three years. *(Output)*	FY 2015: 80% Target: 66% (Target Exceeded)	100%	33%	+33%
214305: Increase laboratory surge capacity in the event of terrorist attack on the food supply. (Radiological and chemical samples/week). *(Outcome)*	FY 2015: 2,500 rad & 2,100 chem Target: 2,500 rad & 2,100 chem (Target Met)	2,500 rad & 2,100 chem	2,500 rad & 2,100 chem	maintain
224201: Number of foreign and domestic high-risk human drug inspections. *(Output)*	FY 2015: 835 Target: 750 (Target Exceeded)	750	750	maintain
234202: Number of registered domestic blood bank and biologics manufacturing inspections. *(Output)*	FY 2015: 957 Target: 900 (Target Exceeded)	900	900	maintain

Measure	Year and Most Recent Result / Target for Recent Result (Summary of Result)	FY 2016 Target	FY 2017 Target	FY 2017 +/- FY 2016
234203: Number of human foreign and domestic tissue establishment inspections. *(Output)*	FY 2015: 656 Target: 570 (Target Exceeded)	570	570	maintain
244202: Number of domestic and foreign high-risk animal drug and feed inspections. *(Output)*	FY 2015: 303 Target: 250 (Target Exceeded)	250	250	maintain
244203: Cover 100% of targeted prohibited material BSE actual inventory. *(Output)*	FY 2015: 100% Target: 100% (Target Met)	100%	100%	maintain
253201: Number of Medical Device Bioresearch Monitoring (BIMO) inspections. *(Output)*	FY 2015: 305 Target: 300 (Target Exceeded)	300	300	maintain
254201: Number of domestic and foreign Class II and Class III device inspections. *(Output)*	FY 2015: 2,080 Target: 1,600 (Target Exceeded)	1,600	1,600	maintain

The following selected items highlight notable results and trends detailed in the performance table.

FSMA High Risk Domestic Inspection Coverage

FDA is committed to ensuring that the U.S. food supply continues to be among the safest in the world. ORA plays a critical role in the implementation of FSMA; and the importance of complying with high-risk domestic inspections mandated by FSMA legislation. FSMA legislation requires inspecting 100 percent of the high-risk domestic inventory every three years. This goal serves to cumulatively track the progress over the three year period as the coverage of inventory approaches the FSMA requirement of 100 percent. FY 2015 marked year two of the three-year cycle, and ORA has made significant progress by inspecting 80% of the total cumulative high-risk domestic inventory. The FY 2016 target is set at 100% and closes the three year cycle. FY 2017 marks the beginning of the next three year cycle, and while the target returns to 33% to signify the first third of the inventory, the delta shows that it is still an increase of 33% because of the new three year cycle.

Laboratory Surge Capacity

A critical component of controlling threats from deliberate food-borne contamination is the ability to rapidly test large numbers of samples of potentially adulterated foods for the presence of contaminants. Improvements in surge capacity will have public health value even in non-deliberate food contamination by assisting FDA in identifying and removing contaminated food products from the marketplace as soon as possible in order to protect the public health and mitigate disruption in the U.S. food supply chain.

Conduct Highest Risk BSE Inspections

Since establishing this performance goal, the aim has been to inspect 100% of the licensed and unlicensed feed mills, renderers and protein blenders that make or use prohibited materials in their feed manufacturing operation. However, the total inventory of these firms has been dropping for several years as firms are either combined through mergers or just stop using prohibited materials. ORA will continue to cover 100% of the targeted prohibited BSE inventory, even though we estimate a reduction of 35% of the BSE inventory over the next few years.

PROGRAM ACTIVITY DATA

Field Foods Program Activity Data (PAD)

Field Foods Program Workload and Outputs	FY 2015 Actuals	FY 2016 Estimate	FY 2017 Estimate
FDA WORK			
DOMESTIC INSPECTIONS			
UNIQUE COUNT OF FDA DOMESTIC FOOD ESTABLISHMENT INSPECTIONS	***7,334***	***8,500***	***8,500***
Domestic Food Safety Program Inspections	5,078	Activities no longer planned to this level due to enactment of FSMA and alignment of resources into only high and low risk	Activities no longer planned to this level due to enactment of FSMA and alignment of resources into only high and low risk
Imported and Domestic Cheese Program Inspections	220		
Domestic Low Acid Canned Foods/ Acidified Foods Inspections	325		
Domestic Fish & Fishery Products (HACCP) Inspections	979		
Import (Seafood Program Including HACCP) Inspections	331		
Juice HACCP Inspection Program (HACCP)	195		
Interstate Travel Sanitation (ITS) Inspections	897		
Domestic Field Exams/Tests	2,154	3,945	3,945
Domestic Laboratory Samples Analyzed	13,157	11,300	11,300
FOREIGN INSPECTIONS			
UNIQUE COUNT OF FDA FOREIGN FOOD ESTABLISHMENT INSPECTIONS [1]	***1,357***	***1,200***	***1,200***
All Foreign Inspections	1,357	1,200	1,200
TOTAL UNIQUE COUNT OF FDA FOODS ESTABLISHMENT INSPECTIONS	***8,691***	***9,700***	***9,700***
IMPORTS			
Import Field Exams/Tests	245,804	160,200	160,200
Import Laboratory Samples Analyzed	21,128	35,300	35,300
Import Physical Exam Subtotal	**266,932**	**195,500**	**195,500**
Import Line Decisions	13,080,429	13,718,926	14,388,591
Percent of Import Lines Physically Examined	2.04%	1.43%	1.36%
Prior Notice Security Import Reviews (Bioterrorism Act Mandate)	80,990	80,000	80,000
STATE WORK			
UNIQUE COUNT OF STATE CONTRACT FOOD ESTABLISHMENT INSPECTIONS	***9,277***	***10,523***	***10,523***
UNIQUE COUNT OF STATE PARTNERSHIPS FOOD ESTABLISHMENT INSPECTIONS	***88***	***273***	***273***
State Contract Food Safety (Non HACCP) Inspections	8,225	9,318	9,318
State Contract Domestic Seafood HACCP Inspections	973	1,104	1,104
State Contract Juice HACCP	79	103	103
State Contract LACF	111	68	68
State Partnership Inspections	88	273	273
State Contract Foods Funding	$12,706,038	$13,087,219	$13,479,836
Number of FERN State Laboratories	19	19	19
Number of Food Safety State Laboratories	15	15	15
Annual FERN State Cooperative Agreements/Operations Funding	$20,701,071	$21,322,103	$21,961,766
Total State & Annual FERN Funding	**$33,407,109**	**$34,409,322**	**$35,441,602**
GRAND TOTAL FOOD ESTABLISHMENT INSPECTIONS	***18,056***	***20,496***	***20,496***

[1] The FY 2015 actual unique count of foreign inspections includes 150 OIP inspections (65 for China, 65 for India, & 20 for Latin America).

Field Cosmetics Program Activity Data (PAD)

Field Cosmetics Program Workload and Outputs	FY 2015 Actuals	FY 2016 Estimate	FY 2017 Estimate
FDA WORK			
DOMESTIC INSPECTIONS			
UNIQUE COUNT OF FDA COSMETICS ESTABLISHMENT INSPECTIONS	***88***	***100***	***100***
Domestic Inspections	88	100	100
FOREIGN INSPECTIONS			
UNIQUE COUNT OF FDA COSMETICS ESTABLISHMENT INSPECTIONS	***3***	***0***	***0***
Foreign Inspections	3	0	0
IMPORTS			
Import Field Exams/Tests	17,133	1,600	1,600
Import Laboratory Samples Analyzed	488	500	500
Import Physical Exam Subtotal	**17,621**	**2,100**	**2,100**
Import Line Decisions	2,930,682	3,111,524	3,303,525
Percent of Import Lines Physically Examined	0.60%	0.07%	0.06%
GRAND TOTAL COSMETICS ESTABLISHMENT INSPECTIONS	***91***	***100***	***100***

Field Human Drugs Program Activity Data (PAD)

Field Human Drugs Program Workload and Outputs	FY 2015 Actuals	FY 2016 Estimate	FY 2017 Estimate
FDA WORK			
DOMESTIC INSPECTIONS			
UNIQUE COUNT OF FDA DOMESTIC HUMAN DRUG ESTABLISHMENT INSPECTIONS	***1,775***	***1,856***	***1,856***
Pre-Approval Inspections (NDA)	112	171	171
Pre-Approval Inspections (ANDA)	122	216	216
Bioresearch Monitoring Program Inspections	573	563	563
Drug Processing (GMP) Program Inspections	713	591	591
Compressed Medical Gas Manufacturers Inspections	201	295	295
Adverse Drug Events Project Inspections	92	120	120
OTC Monograph Project and Health Fraud Project Inspections	42	79	79
Compounding Inspections[1]	115	130	130
Domestic Laboratory Samples Analyzed	1,450	1,450	1,450
FOREIGN INSPECTIONS			
UNIQUE COUNT OF FDA FOREIGN HUMAN DRUG ESTABLISHMENT INSPECTIONS [2]	***1072***	***999***	***999***
Foreign Pre-Approval Inspections (NDA) incl PEPFAR	107	98	98
Foreign Pre-Approval Inspections (ANDA) incl PEPFAR	194	83	83
Foreign Bioresearch Monitoring Program Inspections incl PEPFAR	221	255	255
Foreign Drug Processing (GMP) Program Inspections	814	843	843
Foreign Adverse Drug Events Project Inspections	10	15	15
TOTAL UNIQUE COUNT OF FDA HUMAN DRUG ESTABLISHMENT INSPECTIONS	***2,847***	***2,855***	***2,855***
IMPORTS			
Import Field Exams/Tests	8,437	7,200	7,200
Import Laboratory Samples Analyzed	586	490	490
Import Physical Exam Subtotal	**9,023**	**7,690**	**7,690**
Import Line Decisions	688,208	734,654	784,234
Percent of Import Lines Physically Examined	1.31%	1.05%	0.98%
STATE WORK			
UNIQUE COUNT OF STATE PARTNERSHIP HUMAN DRUG ESTABLISHMENT INSPECTIONS [3]	***0***	***0***	***0***
State Partnership Inspections: Compressed Medical Gas Manufacturers Inspections	0	0	0
State Partnership Inspections: GMP Inspections	0	0	0
GRAND TOTAL HUMAN DRUG ESTABLISHMENT INSPECTIONS	***2,847***	***2,855***	***2,855***

[1] The number of compounding inspections includes inspections of compounding pharmacies and outsourcing facilities under sections 503A and 503B respectively.

[2] The FY 2015 actual unique count of foreign inspections includes 69 OIP inspections (24 for China, 36 for India, & 9 for Latin America).

[3] The State inspections that are funded by the FDA are now being obligated via formal contract funding vehicles.

Field Biologics Program Activity Data (PAD)

Field Biologics Program Workload and Outputs	FY 2015 Actuals	FY 2016 Estimate	FY 2017 Estimate
FDA WORK			
DOMESTIC INSPECTIONS			
UNIQUE COUNT OF FDA DOMESTIC BIOLOGICS ESTABLISHMENT INSPECTIONS	***1,835***	***2,047***	***2,047***
Bioresearch Monitoring Program Inspections	97	100	100
Blood Bank Inspections	893	1,060	1,060
Source Plasma Inspections	175	194	194
Pre-License, Pre-Market Inspections	54	7	7
GMP Inspections	27	28	28
GMP (Device) Inspections	6	7	7
Human Tissue Inspections	600	661	661
FOREIGN INSPECTIONS			
UNIQUE COUNT OF FDA FOREIGN BIOLOGICS ESTABLISHMENT INSPECTIONS	***67***	***47***	***47***
Bioresearch Monitoring Program Inspections	19	11	11
Foreign Human Tissue Inspections	1	0	0
Blood Bank Inspections	7	8	8
Pre-License, Pre-market Inspections	8	2	2
GMP Inspections (Biologics & Device)	32	20	20
TOTAL UNIQUE COUNT OF FDA BIOLOGIC ESTABLISHMENT INSPECTIONS	***1,902***	***2,094***	***2,094***
IMPORTS			
Import Field Exams/Tests	85	45	45
Import Line Decisions	150,673	176,313	206,317
Percent of Import Lines Physically Examined	0.06%	0.03%	0.02%
GRAND TOTAL BIOLOGICS ESTABLISHMENT INSPECTIONS	***1,902***	***2,094***	***2,094***

Field Animal Drugs & Feeds Program Activity Data (PAD)

Field Animal Drugs and Feeds Program Workload and Outputs	FY 2015 Actuals			FY 2016 Estimate			FY 2017 Estimate		
	Total	Animal Drugs	Feeds	Total	Animal Drugs	Feeds	Total	Animal Drugs	Feeds
FDA WORK									
DOMESTIC INSPECTIONS									
UNIQUE COUNT OF FDA DOMESTIC ANIMAL DRUGS AND FEEDS ESTABLISHMENT INSPECTIONS	***1,565***	***226***	***1,356***	***1,565***	***299***	***1,524***	***1,565***	***299***	***1,524***
Pre-Approval /BIMO Inspections	39	39	0	79	79	0	79	79	0
Drug Process and New ADF Program Inspections	189	189	0	222	222	0	222	222	0
BSE Inspections	1,163	0	1,163	1,205	0	1,205	1,205	0	1,205
Feed Contaminant Inspections	24	0	24	25	0	25	25	0	25
Illegal Residue Program Inspections	424	0	424	473	0	473	473	0	473
Feed Manufacturing Program Inspections	178	0	178	141	0	141	141	0	141
Domestic Laboratory Samples Analyzed	1,650	4	1,646	2,458	26	2,432	2,458	26	2,432
FOREIGN INSPECTIONS									
UNIQUE COUNT OF FDA FOREIGN ANIMAL DRUGS AND FEEDS ESTABLISHMENT INSPECTIONS [1]	***98***	***83***	***15***	***75***	***69***	***6***	***75***	***69***	***6***
Foreign Pre-Approval/Bioresearch Monitoring Program Inspections	35	35	0	45	45	0	45	45	0
Foreign Drug Processing and New ADF Program Inspections	70	70	0	33	33	0	33	33	0
Foreign Feed Inspections	8	0	8	7	0	7	7	0	7
BSE Inspections	10	0	10	0	0	0	0	0	0
TOTAL UNIQUE COUNT OF FDA ANIMAL DRUGS AND FEEDS ESTABLISHMENT INSPECTIONS	***1,663***	***309***	***1,371***	***1,640***	***368***	***1,530***	***1,640***	***368***	***1,530***
IMPORTS									
Import Field Exams/Tests	7,311	1,708	5,603	3,600	185	3,415	3,600	185	3,415
Import Laboratory Samples Analyzed	931	1	930	750	2	748	750	2	748
Import Physical Exam Subtotal	**8,242**	**1,709**	**6,533**	**4,350**	**187**	**4,163**	**4,350**	**187**	**4,163**
Import Line Decisions	416,860			446,903			479,111		
Percent of Import Lines Physically Examined	1.98%			0.97%			0.91%		
STATE WORK									
UNIQUE COUNT OF STATE CONTRACT ANIMAL FEEDS ESTABLISHMENT INSPECTIONS	***4,426***	***0***	***4,426***	***5,045***	***0***	***5,045***	***5,045***	***0***	***5,045***
UNIQUE COUNT OF STATE PARTNERSHIPS ANIMAL FEEDS ESTABLISHMENT INSPECTIONS [2]	***6***	***0***	***6***	***0***	***0***	***0***	***0***	***0***	***0***
UNIQUE COUNT OF STATE COOPERATIVE AGREEMENT ANIMAL FEEDS ESTABLISHMENT INSPECTIONS [3]	***306***	***0***	***306***	***0***	***0***	***0***	***0***	***0***	***0***
State Contract Inspections: BSE	4,105	0	4,105	5,000	0	5,000	5,000	0	5,000
State Contract Inspections: Feed Manufacturers	741	0	741	320	0	320	320	0	320
State Contract Inspections: Illegal Tissue Residue	276	0	276	412	0	412	412	0	412
State Partnership Inspections: BSE and Other	6	0	6	0	0	0	0	0	0
State Cooperative Agreement BSE Inspections	306	0	306	0	0	0	0	0	0
State Contract Animal Drugs/Feeds Funding	$2,917,129	0	$2,917,129	$3,004,643	0	$3,004,643	$3,094,782	0	$3,094,782
BSE Cooperative Agreement Funding	$0	0	$0	$0	0	$0	$0	0	$0
State Contract Tissue Residue Funding	$469,072	0	$469,072	$483,144	0	$483,144	$497,638	0	$497,638
Total State Funding	**$3,386,201**	**$0**	**$3,386,201**	**$3,487,787**	**$0**	**$3,487,787**	**$3,592,420**	**$0**	**$3,592,420**
GRAND TOTAL ANIMAL DRUGS AND FEEDS ESTABLISHMENT INSPECTIONS	***6,401***	***309***	***6,109***	***6,685***	***368***	***6,575***	***6,685***	***368***	***6,575***

[1] The FY 2015 actual unique count of foreign inspections includes 7 OIP inspections (7 for China).

[2] The State inspections that are funded by the FDA are now being obligated via formal contract funding vehicles and this number is expected to decrease in the future until there are no planned State

[3] The State cooperative agreement BSE inspections that are funded by the FDA are now being obligated via formal contract funding vehicles and this number along with the funding for these inspections are expected to decrease in the future until there are no planned State Cooperative Agreement BSE inspections.

Field Devices and Radiological Health Program Activity Data (PAD)

Field Devices and Radiological Health Program Workload and Outputs	FY 2015 Actuals	FY 2016 Estimate	FY 2017 Estimate
FDA WORK			
DOMESTIC INSPECTIONS			
UNIQUE COUNT OF FDA DOMESTIC DEVICES ESTABLISHMENT INSPECTIONS	***2,587***	***2,864***	***2,864***
Bioresearch Monitoring Program Inspections	296	300	300
Pre-Market Inspections	57	67	67
Post-Market Audit Inspections	34	34	34
GMP Inspections	1,555	1,594	1,594
Inspections (MQSA) FDA Domestic (non-VHA)	625	723	723
Inspections (MQSA) FDA Domestic (VHA)	53	43	43
Domestic Radiological Health Inspections	42	101	101
Domestic Field Exams/Tests	96	139	139
Domestic Laboratory Samples Analyzed	176	183	183
FOREIGN INSPECTIONS			
UNIQUE COUNT OF FDA FOREIGN DEVICES ESTABLISHMENT INSPECTIONS [1]	***729***	***603***	***603***
Foreign Bioresearch Monitoring Inspections	14	25	25
Foreign Pre-Market Inspections	42	31	31
Foreign Post-Market Audit Inspections	26	19	19
Foreign GMP Inspections	639	521	521
Foreign MQSA Inspections	14	15	15
Foreign Radiological Health Inspections	55	45	45
TOTAL UNIQUE COUNT OF FDA DEVICE ESTABLISHMENT INSPECTIONS	***3,316***	***3,467***	***3,467***
IMPORTS			
Import Field Exams/Tests	26,654	18,821	18,821
Import Laboratory Samples Analyzed	658	1,123	1,123
Import Physical Exam Subtotal	**27,312**	**19,944**	**19,944**
Import Line Decisions	17,252,283	19,044,228	21,022,297
Percent of Import Lines Physically Examined	0.16%	0.10%	0.09%
STATE WORK			
UNIQUE COUNT OF STATE CONTRACT DEVICES ESTABLISHMENT INSPECTIONS	***7,904***	***7,929***	***7,929***
UNIQUE COUNT OF STATE PARTNERSHIPS DEVICE ESTABLISHMENT INSPECTIONS [2]	***0***	***0***	***0***
Inspections (MQSA) by State Contract	6,809	6,800	6,800
Inspections (MQSA) by State non-Contract	1,075	1,110	1,110
GMP Inspections by State Contract	20	19	19
State Partnership GMP Inspections	0	0	0
State Contract Devices Funding	$287,518	$296,144	$305,028
State Contract Mammography Funding	$9,317,189	$9,596,705	$9,884,606
Total State Funding	**$9,604,707**	**$9,892,849**	**$10,189,634**
GRAND TOTAL DEVICES ESTABLISHMENT INSPECTIONS	***11,220***	***11,396***	***11,396***

[1] The FY 2015 actual unique count of foreign inspections includes 10 OIP inspections (9 for China and 1 for India).

[2] The State inspections that are funded by the FDA are now being obligated via formal contract funding vehicles.

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TOBACCO CONTROL ACT

(Dollars in Thousands)	FY 2015 Final	FY 2015 Actuals	FY 2016 Enacted	FY 2017 President's Budget	FY 2017 +/- FY 2016
Family Smoking Prevention and Tobacco Control Act	**531,527**	**554,469**	**564,117**	**596,338**	**32,221**
Center (UF Only)	515,640	544,999	547,454	581,438	33,984
Field (UF Only)	15,887	9,470	16,663	14,900	-1,763
FTE	**699**	**708**	**882**	**960**	**78**

Authorizing Legislation: Federal Food, Drug, and Cosmetic Act (21 U.S.C. 321-399); The Family Smoking Prevention and Tobacco Control Act of 2009 (P.L. 111-31); The Federal Cigarette Labeling and Advertising Act (15 U.S.C. 1333); Public Health Service Act of 1944 (42 U.S.C. 201); Federal Advisory Committee Act of 1972, as amended.

Allocation Methods: Competitive Grants; Contracts; Direct Federal/Intramural

PROGRAM DESCRIPTION AND ACCOMPLISHMENTS

The Center for Tobacco Products (CTP), established in 2009, oversees the implementation of the Family Smoking Prevention and Tobacco Control Act (Tobacco Control Act). FDA works to protect Americans from tobacco-related death and disease by regulating the manufacture, distribution, and marketing of tobacco products, and by educating the public about tobacco products and the dangers their use poses.

FDA executes its regulatory and public health responsibilities in program areas that support the following objectives:

- reducing initiation of tobacco product use
- decreasing the harms of tobacco products
- encouraging cessation among tobacco product users.

To achieve its goals, FDA relies on its statutory authorities to regulate the manufacturing, marketing, and distribution of tobacco products. FDA requires domestic tobacco product manufacturers to register and provide a list of tobacco products they manufacture, and tobacco product manufacturers and importers are required to submit a listing of ingredients in their products. Industry must report harmful and potentially harmful constituents and FDA prohibits inaccurate, false, or misleading tobacco product labeling and marketing.

Some of CTP's authorized activities include:

- inspecting tobacco product manufacturing establishments and tobacco retailers to ensure compliance with laws and regulations
- establishing tobacco product standards to protect public health
- issuing regulations on the marketing and advertising of tobacco products
- strengthening health warnings for cigarettes and smokeless tobacco products
- taking enforcement action, for violations of the Tobacco Control Act and implementing regulations.

The following selected accomplishments demonstrate FDA's delivery of its regulatory and public health responsibilities.

Compliance
As of December 31, 2015, FDA had contracts in 55 states, territories, and tribal jurisdictions to conduct compliance check inspections at tobacco retail establishments. Compliance check inspections pertain to tobacco marketing, sales, and distribution of tobacco products at retail locations. From the beginning of the program in October 2010 through December 2015, FDA has conducted more than 549,300 compliance check inspections at tobacco retail establishments.

Regulation
On April 24, 2014, FDA issued a proposed rule - the "deeming rule" - to deem additional products that meet the statutory definition of a "tobacco product," to be subject to FDA's regulatory authority. This includes e-cigarettes, nicotine gels, some or all cigars, hookah, and pipes. The draft final rule was submitted to the Office of Management and Budget (OMB) on October 19, 2015, for review.

Under the proposed rule, manufacturers of newly deemed tobacco products would be required to:

- register establishments with FDA
- report product and ingredient listings
- report harmful and potentially harmful constituents
- market new tobacco products only after receiving authorization from FDA
- make direct and implied claims of reduced risk only after receiving a risk or exposure modification order from FDA
- not distribute free samples.

Also under the proposed rule, these provisions would apply to newly "deemed" tobacco products:

- minimum age and identification restrictions to prevent sales to underage youth
- requirements to include health warnings
- prohibition of vending machine sales, unless in a facility that never admits youth.

After Administration review, the final rule can be issued.

FDA continues to invest in scientific research to better understand regulated tobacco products and patterns of tobacco use. In FY 2015, FDA funded 114 research projects via the National Institutes of Health (NIH). These research projects include grants, intramural projects, and contracts which will address important FDA research priorities.

Substantial Equivalence

Manufacturers may submit Substantial Equivalence (SE) Reports to seek FDA authorization to legally market a new tobacco product. FDA has made significant progress in this important area and has built a rigorous, science-based process to review these SE Reports to determine whether the new product is substantially equivalent.

A substantially equivalent (SE) tobacco product is a product FDA has determined has the same characteristics as a predicate tobacco product or has different characteristics than the predicate tobacco product but the information submitted demonstrates that the new product does not raise different questions of public health. A predicate tobacco[87] product is one that was commercially marketed in the United States-other than in a test market-as of February 15, 2007, or a product previously found to be substantially equivalent by FDA.

FDA reviews these SE reports to determine if the new tobacco product is substantially equivalent and is in compliance with the requirements of the law. If both of these criteria are met, FDA will issue a written order permitting the product to be legally marketed in the United States. A manufacturer cannot legally market a new tobacco product if they have not received marketing authorization from FDA[88].

FDA has prioritized the review of regular SE submissions and has made progress in each of the three phases in the SE review process:

- administrative review phase – FDA makes a decision to either accept or refuse the application based on requirements in the statute
- notification phase – the scientific review team assembles and answers any outstanding predicate eligibility questions
- substantive scientific review phase and issuance of a decision.

FDA no longer has a backlog of regular[89] SE reports. All regular SE reports received are immediately entered into review.

As of December 31, 2015:

- 71 percent of all full[90] regular SE reports received to date have been resolved by a final decision[91]
- FDA completed administrative reviews of 5,492 of the 5,650 SE submissions received to date
- FDA issued a Scientific Advice and Information Request Letter or a Preliminary Finding Letter for 75 percent of the pending full regular SE reports.

These letters communicate to the manufacturer the deficiencies in a SE Report that preclude either further scientific review or issuance of an SE Order.

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[87] http://www.fda.gov/TobaccoProducts/Labeling/TobaccoProductReviewEvaluation/NewTobaccoProductReviewand Evaluation/Substantial Equivalence/ucm304517.htm

[88] If a new tobacco product was commercially marketed after February 15, 2007 but before March 22, 2011; and a Substantial Equivalence Report was submitted by March 22, 2011, then this new tobacco product may continue to be marketed unless FDA issues an order that the new product is not substantially equivalent to an appropriate predicate product.

[89] SE reports received after March 22, 2011 are "regular" reports and products covered by those reports cannot be marketed unless FDA first issues a finding of substantial equivalence.

[90] In March 2015, FDA issued guidance permitting companies to submit "streamlined" SE reports under certain conditions. Review of these streamlined reports is ongoing and is not counted here.

[91] Final decisions include refuse-to-accept, withdrawn, substantially equivalent (SE), not substantially equivalent (NSE)

In FY 2015, FDA implemented performance measures, including timeframes for review of regular SE reports and review of Exemption from SE requests.[92] FDA has been able to develop these goals because of the increased knowledge of scientific evidence and data gathering needed to adequately review these SE reports.

FDA is also continuing scientific review of provisional SE reports.[93] Since the products covered by these reports are already on the market, FDA is prioritizing their review based on an initial Public Health Impact (PHI) review of their potential to raise different questions of public health. Those Provisional SE reports with the highest potential are placed in the highest tier and reviewed first.

Once FDA has had more experience addressing provisional SE reports, we expect to better understand the time required for review. At that time, we intend to set performance measures for provisional SE reports.

As of December 31, 2015:

- FDA has begun scientific review of 857 provisional SE Reports
- Fourteen percent of full provisional SE reports have been resolved by a final decision.[94]

FDA expects the time required for review of SE submissions to decrease as CTP continues to improve the efficiency of its review process and companies continue to improve the completeness and quality of their applications.

Public Education

FDA's first ever national public education campaign to help prevent youth tobacco use – "The Real Cost"- continues to exceed paid media reach and frequency goals by reaching more than 90 percent of the target audience every quarter since launch.

The campaign is designed to reduce the number of youth aged 12 to 17 who smoke. To keep the target audience engaged with its messaging, FDA refreshed the campaign with a second full wave of advertising in June 2015. Additional advertising is in development. The campaign also recently won an advertising industry award in June 2015 – a gold Effie Award in the Disease Awareness and Education category – for its insightful communications strategy, outstanding creative, and success in market.

On May 12, 2015, FDA launched the first phase of its "Fresh Empire" campaign in four Southeast markets in the United States: Atlanta, GA; Birmingham, AL; Charlotte, NC; and Raleigh, NC. The campaign is designed to prevent and reduce tobacco use among at-risk

[92] Exemption from SE is an alternative to substantial equivalence in which the only change is to an additive, the product change is minor and a full substantial equivalence report is not necessary to ensure that permitting the tobacco products to be marketed is appropriate for the protection of public health.
[93] SE reports received before March 23, 2011 for products introduced to market or changed between February 16, 2007, and March 22, 2011 are "provisional" reports and products covered by those reports can continue to be marketed until FDA issues a finding of not-substantial equivalence.
[94] Final decisions include refuse-to-accept, withdrawn, substantially equivalent (SE), not substantially equivalent (NSE).

multicultural youth aged 12 to 17 including African American, Hispanic, and Asian American/Pacific Islander youth. The campaign targets youth who identify with the Hip Hop peer crowd – an innovative and promising segmentation approach that focuses on youth who share the same core ideals, have similar life experiences and common interests, and may be at higher risk for tobacco use. FDA expanded the "Fresh Empire" campaign to markets throughout the U.S. in October 2015.

Enhance Oversight

FDA is committed to regulating the manufacture, marketing, and distribution of tobacco products to protect public health and to reduce tobacco use, especially among youth. FDA's strong implementation of the Tobacco Program is carried out with the use of regulations and guidance that clarify regulatory authority and explain FDA's expectations to the regulated industry and the public.

FDA has established a framework for industry registration, product listing, and submission of information concerning ingredients and harmful and potentially harmful constituents (HPHCs) in tobacco products and tobacco smoke. Furthermore, FDA ensures industry compliance by enforcing warning label and advertising requirements, and by restricting access and marketing of cigarettes and smokeless tobacco products to youth through the use of compliance inspections, warning letters, and civil monetary penalties.

Maintaining a Strong Science Base for Oversight Actions

FDA reduces tobacco harms by investing in research to inform regulations and help assess the impact of regulatory actions. In FY 2015, FDA invested more than $232 million in scientific research. Through research, FDA better understands patterns of tobacco use, the harms caused by tobacco use, and where regulatory intervention consistent with FDA's statutory authority is most needed.

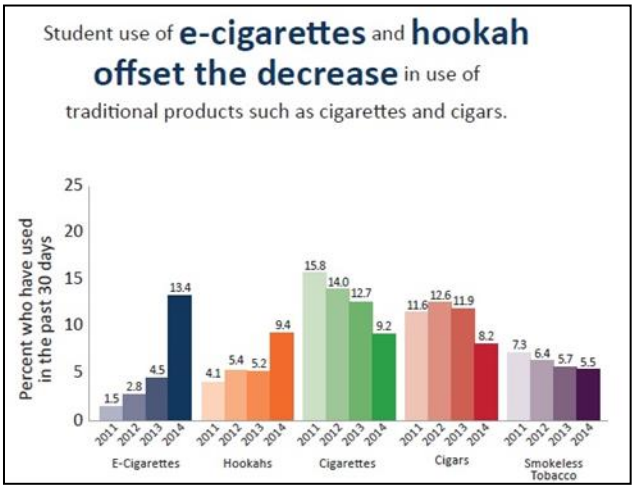
FDA research supports regulatory and public education efforts to improve public health. In addition to conducting independent research to support regulatory science, the Center for Tobacco Products partners with FDA's National Center for Toxicological Research (NCTR) and Southeast Regional Lab (SRL), as well as other governmental agencies, including the National Institutes of Health (NIH) and the Centers for Disease Control and Prevention (CDC). By leveraging the resources of other Federal agencies, FDA brings science-based regulation to the manufacturing, marketing, and distribution of tobacco products.

NIH Partnerships

FDA avoids duplication of resources and enhances scientific research capability by collaborating with NIH and tapping into its well-established infrastructure. Below are some of CTP's areas of research.

FDA and NIH's Tobacco Regulatory Science Program (TRSP) collaborates to stimulate tobacco regulatory research and fund projects to study:

- the impact of marketing and communications on tobacco use behavior
- perceptions, knowledge, attitudes, and beliefs regarding tobacco products
- toxicity, carcinogenicity, and health risks of tobacco products
- varying nicotine levels and other constituents' effects on initiation, dependence, and quitting.



FDA funds research via NIH that includes studying the impact of flavor and sweetness of different tobacco products on use behaviors such as experimentation and initiation among youth and young adults.

In FY 2015, FDA expanded existing grant funded research for toxicological assessments of flavors in e-cigarettes and cigars and for the public display of Harmful and Potentially Harmful (HPHC) information.

FDA continues to fund the Center for Evaluation and Coordination of Training and Research (CECTR) in Tobacco Regulatory Science via NIH to support evaluation of the CTP-funded research projects and facilitate coordination and communications of research and scientific training among those projects.

FDA collaborates with NIH to fund the 14 Tobacco Centers of Regulatory Science (TCORS). The objective of TCORS is to conduct multidisciplinary research that will inform FDA's regulatory actions related to the manufacture, distribution, and marketing of tobacco products.

FDA partners with NIH to fund The Population Assessment of Tobacco and Health (PATH) Study. PATH is a longitudinal cohort study with a nationally representative sample of U.S. civilian, non-institutionalized persons ages 12 and older. The study follows approximately 46,000 never, current, and former users of tobacco products. It is intended to yield data to inform CTP's regulatory activities including:

- comprehensive data on tobacco product use, attitudes, associated health outcomes
- biomarkers of tobacco exposure and related disease for adults.

Data collection for Wave 2 of the PATH Study was completed October 2015, and Wave 3 began October 2015 and will be completed October 2016.

<u>CDC Partnerships</u>

FDA is partnering with the Division of Laboratory Sciences at CDC on research projects which use laboratory-based approaches to expand knowledge of how best to regulate tobacco products. These research projects include:

- analyses of tobacco products and mainstream smoke
- method development for biomarkers
- exposure assessments under actual use conditions
- further method development for HPHCs.

CDC is also providing the analyses of tobacco exposure biomarkers from research data collected in the PATH Study. In order to provide critical data on the impact of tobacco regulation on populations, FDA collaborates with CDC to conduct the National Youth Tobacco Survey (NYTS) on an annual basis.

FDA funding has expanded the scope and increased the frequency of data collection for the NYTS. The NYTS is a large annual survey of a nationally representative sample of middle and

high school students that focuses exclusively on tobacco. Data from this survey will allow FDA to monitor awareness of, susceptibility to, and experimentation with and use of, a wide range of tobacco products.

NCTR Partnership

NCTR will continue research on:

- the toxicology of compounds and cigarette smoke
- biomarker discovery
- the toxic and addictive potential of tobacco products
- developmental bioinformatics projects.

Enforcement of the Tobacco Control Act

FDA has a comprehensive compliance and enforcement program to monitor industry compliance with regulatory requirements, and to restrict access and marketing of cigarettes and smokeless tobacco products to youth. As of December 31, 2015, FDA had contracts in 55 states, territories, and Tribal jurisdictions to conduct compliance check inspections at tobacco retail establishments. Compliance check inspections pertain to tobacco marketing, sales, and distribution of tobacco products at retail locations and include ensuring compliance with age and ID verification requirements.

Although most retailers comply after receiving a warning letter, in FY 2015 alone, FDA issued more than 3,200 civil money penalties.

From the beginning of the program in October 2010 through December 2015, FDA has conducted more than 549,300 compliance check inspections at tobacco retail establishments, resulting in FDA issuing over 38,800 warning letters, 6,400 civil money penalties, and 8 No-Tobacco-Sale Order (NTSO) complaints. Under the law, the FDA may pursue an NTSO against retailers that have a total of five or more repeated violations of those restrictions during compliance inspections within 36 months.

Since the program's inception, FDA has commissioned more than 2,300 officers and employees from the states, territories, and their political subdivisions, and provides a training program for those that perform inspections.

FDA exceeded the FY 2015 target goal and conducted 162,873 retail inspections, exceeding the target of 105,000 inspections. FDA also conducted 89%, or 49 of 55, of the target goal for manufacturer inspections. Even though FDA overestimated the number of registered manufacturing facilities that would require inspection in FY 2015, FDA met its plan to inspect half of the actual registered manufacturing facilities (keeping FDA on track to inspect registered manufacturing facilities biennially).

FDA regularly inspects registered establishments that manufacture or process tobacco products to determine compliance with existing laws and regulations. FDA conducts investigations that include sponsorship events and free sample events, and also conducts surveillance of websites, social media, and magazines and other publications that promote and sell regulated tobacco products in the U.S. market. FDA issued over 320 warning letters as a result of these surveillance activities (over 100 of them were issued in FY 2015).

Improve and Safeguard Access to FDA-Regulated Products to Benefit Health

FDA's authority to regulate tobacco products includes premarket review of new tobacco products to determine if their marketing is appropriate for the protection of the public health, or if they are substantially equivalent to existing products. Tobacco products are inherently dangerous. FDA's responsibility is to control access to tobacco products in accordance with FDA's authorities.

New products and product changes are reviewed following three marketing pathways:

- premarket tobacco product application (PMTA)
- reports demonstrating substantial equivalence (SE) to commercially marketed products
- exemption from demonstrating substantial equivalence.

On November 10, 2015, FDA announced that for the first time it has authorized the marketing of new tobacco products through the premarket tobacco application (PMTA) pathway. The marketing orders are for eight PMTA applications received in March 2015. FDA uses a rigorous scientific review to determine if new tobacco products should come to market under this pathway.

Furthermore, before making marketing claims that imply modified risk, manufacturers must submit a Modified Risk Tobacco Product (MRTP) application, and receive an FDA order authorizing a claim that the product reduces harm or the risk of tobacco-related disease.

FDA is currently conducting substantive reviews on ten MRTP applications received in June 2014. These MRTP applications were made available to the public in August 2014, and a docket was opened for public comment. A meeting of FDA's Tobacco Product Scientific Advisory Committee was held on April 9-10, 2015, to review these applications and provide recommendations to FDA. FDA continues to review these applications and intends to issue a decision when the substantive scientific review is complete.

FDA informs small businesses of existing guidances, regulations, and submission pathways through publications and online webinars. These materials aim to provide easily accessible educational opportunities.

Promote Informed Decisions

"The Real Cost" and Public Education Campaigns

FDA is leveraging sustained, comprehensive public education campaigns to work in concert with regulatory action to reduce use of tobacco products and improve public health. As authorized by the Tobacco Control Act, these activities involve planning, developing, producing, and delivering national multimedia public education campaigns.

Multimedia campaigns enable FDA to educate the public about the harms and risks of regulated tobacco products. Specifically, the campaigns will equip the public with important facts about:

- health risks of regulated tobacco products
- addictiveness of regulated tobacco products
- harmful and potentially harmful constituents in regulated tobacco products.

A critical factor in reducing youth tobacco use is to produce and maintain effective levels of campaign awareness within the target population. Studies have specifically confirmed the effectiveness of media campaigns in reducing youth tobacco use. NIH's National Cancer Institute and Community Preventive Services Task Force has conducted comprehensive scientific reviews of studies on the effectiveness of media campaigns to reduce tobacco use.

The reviews concluded that media campaigns to prevent and control tobacco use are effective.

The CDC indicates that tobacco prevention campaigns that reach 75 to 85 percent of the target audience within one year can expect to produce attitude and behavior change within two years if the time in market is adequately sustained.[95] FDA is positioned to sustain "The Real Cost" campaign at the reach, frequency, and time in-market recommended by CDC to achieve behavior change and improve public health.

FDA is implementing a large, two-year outcome evaluation study of "The Real Cost" campaign. The study design is longitudinal, meaning the study will attempt to follow the same youth over time. In FY 2015, short-term outcome evaluation findings for "The Real Cost" suggest that approximately 90 percent of the target audience is aware of the campaign and its messaging. The awareness level is a precursor to positive behavior change. Ultimately, results will be used to determine if exposure to the campaign is associated with a decrease in smoking among youth aged 12 to 17.

FDA plans to launch additional public education campaigns in 2016 including rural youth at risk of smokeless tobacco initiation and lesbian, gay, bisexual, and transgender (LGBT) young adults.

Strengthen Organizational Excellence

FDA provides the infrastructure necessary to support the Agency's responsibilities and authorities of the Tobacco Control Act. Examples include:

- strategic IT systems which support industry applications
- compliance inspections
- collection of tobacco user fees.

In addition, FDA is hiring additional staff to:

- conduct reviews of product applications, including SE, PMTA, and MRTP
- expand research capabilities
- support inspection efforts
- enforce the deeming regulation
- draft regulations and guidances.

[95] Best Practices for Comprehensive Tobacco Control Programs, 2014. http://www.cdc.gov/tobacco/stateandcommunity/best_practices/pdfs/2014/comprehensive.pdf pg.33

FUNDING HISTORY

Fiscal Year	Program Level	Budget Authority	User
FY 2013 Actual	$848,807,000	$0	$848,807,000
FY 2014 Actual	$570,536,000	$0	$570,536,000
FY 2015 Actual	$554,469,000	$0	$554,469,000
FY 2016 Enacted	$564,117,000	$0	$564,117,000
FY 2017 President's Budget	$596,338,000	$0	$596,338,000

BUDGET REQUEST

The FY 2017 Budget Request is $596,338,000, all from user fees. This amount is the FY 2017 level authorized in the Tobacco Control Act less the amounts for GSA Rent and FDA Headquarters, which are shown in their own sections of the budget request. This amount is an increase of $32,221,000 above the FY 2016 Enacted level.

The Center for Tobacco Products amount in this request is $581,438,000. The Office of Regulatory Affairs amount is $14,900,000. The Tobacco Control Act requires this funding be used only for FDA tobacco regulatory activities. Conversely, the law prohibits the use of non-tobacco funds for FDA tobacco regulatory activities.

In FY 2017, CTP will continue its efforts on five strategic priorities:

- Product Standards
- FDA-wide Comprehensive Nicotine Regulatory Policy
- Premarket and Postmarket Controls: Regulations and Product Reviews
- Compliance and Enforcement
- Public Education.

Specifics on CTP's FY 2017 five strategic priorities and its many other efforts are provided below.

Strategic Priorities

Product Standards
Section 907 of the Federal Food, Drug, and Cosmetic Act gives FDA the authority to issue, via notice-and-comment rulemaking, tobacco product standards that are appropriate for the protection of the public health. This authority is one of the most powerful tools that FDA has to regulate tobacco. CTP is advancing a product standard strategy to yield strong standards to improve public health, by exploring potential standards for addictiveness, toxicity, and appeal.

FDA-wide Comprehensive Nicotine Regulatory Policy
With passage of the Tobacco Control Act, FDA now regulates a broad range of nicotine-delivering products, from cigarettes to medicinal nicotine gum and patch. FDA is establishing an integrated, agency-wide policy on nicotine-containing products that is public health based and recognizes the reality that people use tobacco for the nicotine but die from the toxins in the tobacco and in tobacco smoke. Beyond finalizing the "deeming rule," related activities include:

- developing jurisdiction policy on nicotine-containing products across FDA

- working with CDER and CDRH to determine how regulation of therapeutic nicotine products – Rx, OTC, drugs, devices – should evolve
- considering regulatory guidance on premarket review policy based on the principle of relative toxicity and risk.

Premarket and Postmarket Control: Regulations and Product Reviews
FDA's reviews act as a gatekeeper between tobacco products and consumers. FDA ensures that new products cannot be commercially sold without review by requiring manufacturers to seek FDA authorization before:

- marketing new tobacco products
- marketing new tobacco products demonstrating substantial equivalence[96] to certain commercially marketed products
- modifying existing tobacco products.

CTP is exploring developing additional rules and guidances for product review pathways, product standards, Tobacco Product Manufacturing Practices, and registration and product listing. In addition to developing rules and guidances, CTP will continue to establish performance measures for product reviews.

Compliance and Enforcement
FDA focuses on the utilization of a national program of inspections, investigations, monitoring, and review of covered tobacco products, sales, manufacturing, and advertising. FDA's compliance programs focus on appropriate enforcement actions that are supported by evidence of violations of the law.

Public Education
FDA maximizes its impact on public health by focusing public education efforts on at-risk audiences such as general market youth who are already experimenting with cigarettes or open to it, multicultural including African American, Hispanic, Asian/Pacific Islander, and American Indian/Alaska Native youth, rural youth, and lesbian, gay, bisexual, and transgender (LGBT) young adults.

Additional FY 2017 Support Activities

FDA will continue to:

- partner with other agencies, including NIH, CDC, and FDA's National Center for Toxicological Research to expand the tobacco regulatory science base
- provide priority research support to CDC and NCTR
- fund the TCORS and other research grants via NIH
- fund research projects via NIH to address FDA time-sensitive research.

In FY 2017, FDA will continue to fund PATH Study analyses and sub-studies via NIH. These sub-studies will enable FDA to gain more in depth insight into a rapidly evolving tobacco market and provide the PATH Study with a way to more comprehensively examine new and emerging issues related to tobacco use behavior and health.

[96] An alternative to new product applications where the characteristics are the same as predicate products (which is a product that was commercially marketed in the United States as of February 15, 2007, or a product previously found to be substantially equivalent) or the characteristics are different, but the product does not raise different questions of public health.

CTP conducts research via research contract organizations to understand consumer perceptions and behaviors of various tobacco products.

Enforcement of the Tobacco Control Act and implementation of regulations are a priority for FY 2017. Continued planned activities include:

- conducting compliance check inspections via the Tobacco Retail Inspection Program[97]
- continuing outreach and education efforts for small tobacco manufacturers and retailers
- responding to inquiries and requests for assistance by tobacco manufacturers and retailers received by CTP's Office of Small Business Assistance
- enforcing warning label requirements, including smokeless tobacco products
- conducting surveillance, investigations, inspections, and sample collections
- identifying criminal violations in tobacco-related cases.

In addition to research and enforcement, FDA is committed to communicating to the public the risks associated with the use of tobacco products, which result in more than 480,000 deaths each year. In FY 2017, FDA will further develop public health education efforts to reach at-risk populations, particularly youth, with messages about the dangers of tobacco use. The investment in tobacco education marks a historic first for FDA and is designed to change the trajectory of tobacco-related disease and death to create long lasting public health benefits.

FDA will:

- complete its longitudinal evaluation of the first two years of "The Real Cost" campaign
- measure the effectiveness of the campaign
- continue its tobacco education campaigns targeting discrete at-risk and underserved audiences including general market youth, multicultural youth, rural youth, LGBT young adults, and others
- continue to develop interactive digital communication technologies and products such as CTP's content sharing platform, Exchange Lab.

PERFORMANCE

The Tobacco Control Act Program's performance measures focus on activities in order to achieve public health goals, as detailed in the following table.

Measure	Year and Most Recent Result / Target for Recent Result (Summary of Result)	FY 2016 Target	FY 2017 Target	FY 2017 +/- FY 2016
280005: Total number of compliance check inspections of retail establishments in States under contract. *(Outcome)*	FY 2015: 162,873 Target: 105,000 (Target Exceeded)	110,000	125,000	+15,000

[97] The results of the Tobacco Retail Inspection Program can be found on FDA's website at http://www.accessdata.fda.gov/scripts/oce/inspections/oce_insp_searching.cfm

Measure	Year and Most Recent Result / Target for Recent Result (Summary of Result)	FY 2016 Target	FY 2017 Target	FY 2017 +/- FY 2016
280006: Review and act on original Regular SE Reports within 90 days of FDA receipt.	New Goal	60%	70%	+10%
280007: Educate at-risk general market 12-17 year olds about the harmful effects of tobacco use. *(Output)*	FY 2015: Reached more than 90% of general market at risk 12-17 year olds with campaign messaging. (Target Exceeded)	Reach 75% of 12-17 year olds with campaign messaging within 1 year.	Reach 75% of 12-17 year olds with campaign messaging within 1 year.	maintain

Compliance Check Inspections

Highlighted from the above table, a key element in enforcing the Tobacco Control Act involves contracts with U.S. state, territory, and tribal agencies, as well as private entities, to conduct retailer compliance checks. In FY 2015, under these state contracts, FDA conducted 162,873 compliance check inspections of retail establishments. Although this number was much higher than the expected FY 2015 full year target of 105,000, it reflects the high level of variability inherent in this goal that requires estimating the number of compliance checks that each jurisdiction will be able to conduct.

FDA is on target to meet or exceed the FY 2016 full year goal of 110,000 compliance checks. It is important to note however, that some contracts are expiring and will need to be renewed in the next year in order for these efforts to continue. Although most states, territories, tribes, and private entities are expected to renew their contracts, there are always outside factors that may prohibit them from doing so. The FY 2016 and 2017 targets consider these challenges, but have still been increased.

PROGRAM ACTIVITY DATA

CTP Workload and Outputs	FY 2015 Actuals	FY 2016 Estimate	FY 2017 Estimate
Tobacco Retailer Inspections			
Number of Inspections	162,873	110,000	125,000
Inspections of Manufacturers Currently Regulated			
Number of Inspections[1]	49	60	60
Substantial Equivalence Reviews			
Number of Regular Full SE Reports[2]	133	100	100

[1] Outyear estimates are based on projected workloads
[2] Limited to Regular Full SE Reports received for currently regulated products

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FDA HEADQUARTERS

(Dollars in Thousands)	FY 2015 Final	FY 2015 Actuals	FY 2016 Enacted	FY 2017 President's Budget	FY 2017 +/- FY 2016
FDA Headquarters	**277,453**	**261,099**	**289,562**	**298,682**	**9,120**
Budget Authority	***173,362***	***173,292***	***181,587***	***178,287***	-3,300
User Fees	***104,091***	***87,807***	***107,975***	***120,395***	***12,420***
Prescription Drug (PDUFA)	*48,639*	*45,300*	*52,139*	*52,763*	624
Medical Device (MDUFA)	*6,733*	*6,770*	*6,259*	*7,101*	842
Generic Drug (GDUFA)	*24,205*	*18,150*	*24,690*	*25,133*	443
Biosimilars (BsUFA)	*1,321*	*178*	*1,354*	*1,388*	34
Animal Drug (ADUFA)	*898*	*937*	*913*	*919*	6
Animal Generic Drug (AGDUFA)	*277*	*318*	*388*	*415*	27
Family Smoking Prevention and Tobacco Control Act	*20,668*	*15,878*	*20,789*	*19,132*	-1,657
Mammography Quality Standards Act (MQSA)	*243*	*276*	*248*	*253*	5
Food and Feed Recall	*75*	---	*75*	*75*	---
Food Reinspection	*480*	---	*480*	*480*	---
Voluntary Qualified Importer Program	*277*	---	*277*	*277*	---
Third Party Auditor Program	---	---	*73*	*73*	---
Outsourcing Facility	*275*	---	*290*	*302*	12
Food Facility Registration and Inspection	---	---	---	*4,662*	4,662
Food Import	---	---	---	*5,766*	5,766
International Courier	---	---	---	*313*	313
Cosmetics	---	---	---	*1,061*	1,061
Food Contact Substance Notification	---	---	---	*282*	282
FTE	**1,134**	**1,104**	**1,167**	**1,200**	**33**

Authorizing Legislation: The Federal Food Drug and Cosmetic Act (21 U.S.C. 321-399); Radiation Control for Health and Safety Act (21 U.S.C. 360hh-360ss); The Federal Import Milk Act (21 U.S.C. 142-149); Public Health Service Act (42 U.S.C. 201, et seq.); Foods Additives Amendments of 1958; Color Additives Amendments of 1960; Animal Drug Amendments (21 U.S.C. 360b); Controlled Substances Act (21 U.S.C. 801-830); The Fair Packaging and Labeling Act (15 U.S.C. 1451-1461); Safe Drinking Water Act (21 U.S.C. 349); Saccharin Study and Labeling Act; Federal Anti-Tampering Act (18 U.S.C. 1365); Medical Device Amendments of 1976; Infant Formula Act of 1980; Drug Enforcement, Education, and Control Act of 1986; Generic Animal Drug and Patent Term Restoration Act; Prescription Drug Marketing Act of 1987; Clinical Laboratory Improvement Amendments of 1988 (42 U.S.C. 201); Prescription Drug Amendments of 1992; Safe Medical Device Amendments of 1992; Nutrition Labeling and Education Act of 1990; Dietary Supplement Health and Education Act of 1994; Animal Medicinal Drug Use Clarification Act of 1994; Animal Drug Availability Act of 1996; Food Quality Protection Act of 1996; Federal Tea Tasters Repeal Act (42 U.S.C. 41); Safe Drinking Water Act Amendments of 1996 (21 U.S.C. 349); Food and Drug Administration Modernization Act of 1997; Antimicrobial Regulation Technical Corrections Act of 1998; Medical Device User Fee and Modernization Act of 2002; Public Health Security and Bioterrorism Preparedness and Response Act of 2002; Best Pharmaceuticals for Children Act of 2002 (21 USC 355a Sec. 505A); Animal Drug User Fee Act of 2003 (21 U.S.C. 379j-11 - 379j-12); Pediatric Research Equity Act of 2003 (21 USC 351 Sec. 505B); Project Bioshield Act of 2004 (21 U.S.C.360bbb-3); Minor Use and Minor Species Animal Health Act of 2004; Food Allergy Labeling and Consumer Protection Act of 2004 Medical Device User Fee Stabilization Act of 2005; Sanitary Food Transportation Act of 2005 Dietary Supplement and Nonprescription Drug and Consumer Protection Act (21 U.S.C. 379aa-1); Pandemic and All-Hazards Preparedness Act, Food and Drug Administration Amendments Act of 2007; Protecting Patients and Affordable Care Act of 2010; The Family Smoking Prevention and Tobacco Control Act of 2009 (P.L. 111-31); The Federal Cigarette Labeling and Advertising Act (15 U.S.C. 1333); FDA Food Safety Modernization Act, Public Law 111-353 (January 4, 2011); The Food and Drug Administration Safety and Innovation Act (P.L. 112-144); Pandemic and All-Hazards Preparedness Reauthorization Act of 2013, and the Drug Quality and Security Act (2013)

Allocation Methods: Direct Federal/Intramural

PROGRAM DESCRIPTION AND ACCOMPLISHMENTS

FDA Headquarters (HQ) provides strategic direction and a wide array of services, including cross-agency special medical, scientific, and regulatory programs, legal advice and counsel and litigation services across FDA's programs. The following narrative describes FDA HQ activities within the FDA Strategic Goal framework.

Enhance Oversight

FDA HQ provides strategic leadership, coordination, and expertise to enhance FDA's oversight of production, manufacturing, the global supply chain, and post market product use. FDA HQ provides policy direction and expertise to establish standards and guidance to protect the safety of patients and consumers. FDA HQ provides advice and assistance to develop and standardize policies and best practices across FDA, consistent with statutes and regulations. FDA HQ also advances regulatory science to inform standards development, analysis, and decision-making to improve FDA oversight before and after FDA-regulated products enter the marketplace.

FDA HQ helps reduce risks in FDA-regulated products through surveillance and enforcement activities, such as inspections of manufacturing and production facilities and active surveillance of adverse events. FDA HQ supports eight foreign posts and conducts activities to promote oversight of the global supply chain. In addition to foreign inspections, these activities include advancing diplomacy, strengthening global regulatory systems, collecting and sharing intelligence and information, and utilizing global data networks and analytics.

FDA HQ leads emergency response and crisis management policies and programs, including global public health issues such as the recent Ebola epidemic. FDA HQ enhances transparency and working relationships with internal and external stakeholders to address foodborne outbreaks and safety issues with regulated products. FDA HQ also plays a key role in providing the legal, regulatory, and policy framework that ensures laws, regulations and policies help support preparedness for and response to Chemical, Biological, Radiological, Nuclear (CBRN) and emerging infectious disease threats.

FDA HQ is also responsible for coordinating pediatric product development, its ethical implementation at FDA, and the legislatively-mandated post marketing safety reporting to the Pediatric Advisory Committee on all products studied in children under the Best Pharmaceuticals for Children Act, the Pediatric Research Equity Act, and for certain devices approved in pediatrics. Pediatric studies, often require multiple centers and countries to fulfill enrollment requirements because of the small number of eligible pediatric subjects. FDA HQ also coordinates and administers the Pediatric International harmonization program known as the "Pediatric Cluster," an international oversight committee that provides regulatory coordination of pediatric studies through monthly scientific and regulatory exchanges with the European Medicines Agency's pediatric program, Japan, Canada, and Australia's regulators. In addition FDA HQ administers the Neonatal and Pediatric Ethics consultative services and Pediatric Scientific outreach programs. These services include consultative services for the Centers, administration of a successful IPA program with academic centers, analysis and publication of pediatric studies (14 peer reviewed publications in 2015) and a monthly publication in the American Academy of Pediatrics newsletter directed to new pediatric labeling information for practitioners.

FDA HQ also oversees the regulation of combination products through developing guidance documents and regulations, training and other activities to ensure timely and effective review, and provides consistent and appropriate postmarket regulation of combination products.

FDA HQ administers several rare disease programs to incentivize the development of products for rare diseases. These include the agency's designation programs for orphan drugs, rare pediatric diseases, humanitarian use devices, and grant programs for orphan drugs and pediatric medical device consortia. FDA HQ coordinates and administers the International "Orphan Cluster."

FDA HQ also leads the development of regulations and policy aimed at ensuring the protection of human subjects, reliability of clinical trial data, and regulatory compliance of FDA-regulated clinical trials. FDA HQ participates in conferences and workshops with agency stakeholders and works with domestic and international partners to harmonize these good clinical practice policy efforts.

Within the area of Oversight, FDA provides Smart Regulation, Safety and Quality, Regulatory Science and Globalization. The following, selected accomplishments demonstrate FDA HQ's delivery of its regulatory and public health responsibilities within the context of current priorities.[98]

Food Safety Modernization Act (FSMA) Rules Published

FDA proposed seven new foundational food safety rules under FSMA to modernize the food safety system and focus on preventing food safety problems, rather than relying primarily on responding to problems after they occur. In September 2014, FDA issued supplemental notices of proposed rulemaking for four out of seven these rules in response to stakeholder in response to stakeholder input in an effort to make the focused proposals more flexible.

The first rule, now finalized, on preventive controls for human food, requires manufacturers, processors, and packers of food for consumption in the United States to take steps such as creating written plans that identify likely hazards, identifying monitoring procedures, recording monitoring results, and implementing corrective actions if problems occur. The second proposed rule on standards for produce safety would establish enforceable science and risk-based standards for the growing, harvesting, packing, and holding of fruits and vegetables on farms.

The second final rule on preventive controls focuses on animal food safety, and sets Current Good Manufacturing Practice standards that take into consideration the unique aspects of the animal food industry.

[98] Please visit http://www.fda.gov/ for additional program information and detailed news items.

The third final rule on standards for produce safety establishes enforceable science- and risk-based standards for the growing, harvesting, packing, and holding of fruits and vegetables on farms.

The fourth final FSMA rules sets the foundation for a new approach to the oversight of the safety of imported food. Imported food comes to the United States from about 150 different countries. Under the proposed rule for Foreign Supplier Verification Programs (FSVP), importers would need to verify that their suppliers are meeting the same level of public health protection as required of domestic producers. Requirements for verification activities are based primarily on the type of food, nature of the hazard identified, and the foreign supplier. This supplement proposed rule requires importers to conduct a more comprehensive evaluation of food and foreign supplier risk and more flexibility for importers in determining appropriate supplier verification measures based on that risk evaluation.

The fifth final rule establishes the program for the accreditation of third-party certification bodies to conduct food safety audits and to certify that foreign food facilities and food produced by such facilities meet applicable FDA food safety requirements. FDA would recognize accreditation bodies based on certain criteria such as competency and impartiality. The accreditation bodies, which may be foreign government agencies or private companies, would in turn accredit third-party auditors to audit and issue certifications for foreign food facilities.

The remaining two FSMA rules are scheduled to be finalized in spring 2016. They address Sanitary Transportation and Intentional Adulteration of the food supply. Rules

Below are rules published by FDA HQ during calendar year 2015. These rules help address various issues.[99]

Date	#	Purpose
Nov 2015	FDA-2011-N-0921	Produce Safety – establish science-based minimum standards for the safe growing, harvesting, packing, and holding of produce (final rule)
Nov 2015	FDA-2011-N-0143	Foreign Supplier Verification Programs (FSVP) – require importers to verify that foreign suppliers are producing food consistent with U.S. standards (final rule)
Nov 2015	FDA-2011-N-0146	User Fees for Accreditation of Third-Party Auditors Program – Establishes user fees to support FDA's Accreditation of Third-Party Auditors Program (final rule)
Sept 2015	FDA-2011-N-0920	Preventive Controls for Human Food – modernize human food CGMPs and require that certain facilities establish and implement hazard analysis and risk-based preventive controls. (final rule)

[99] For more information on FDA rules please visit http://www.fda.gov/RegulatoryInformation/RulesRegulations/default.htm.

Date	#	Purpose
July 2015	FDA-2012-N-1210	FDA revises proposed nutrition facts label rule to include a daily value for added sugars (supplemental proposed rule)
June 2015	FDA-2013-N-0067	Infant Formula – the addition of minimum and maximum levels of selenium to infant formula and related labeling requirements (final rule)
April 2015	FDA-2002-N-0323	Registration of Food Facilities – improve the food facility registration system and implement FSMA registration provisions (proposed rule)

Emergency Preparedness and Response

FDA Coordinated Outbreak Response and Evaluation (CORE) team rapidly detect and respond to major foodborne illness outbreaks and also coordinates with:

- FDA field offices and compliance offices
- State investigative and laboratory resources
- Local city and county resources
- Other federal agencies such as CDC assure timely and effective resolution of foodborne illness outbreaks.

Some examples of these activities in FY 2015 include the:

- multistate *E. coli* O157 linked to Chipotle Mexican Grill
- Blue Bell Ice Cream *Listeria monocytogenes* outbreak that involved four states and caused ten illnesses and three deaths
- *Listeria monocytogenes* outbreak linked to caramel apples that caused 34 hospitalizations in 12 states
- Cyclospora outbreaks from 2012 through 2015
- Hepatitis A outbreak from frozen berries imported from Turkey

In FY 2015, FDA HQ collaborated with the Center for Food Safety and Nutrition, and stakeholders from HHS and USDA to develop a National Agriculture and Food Defense Strategy as mandated under FSMA. This strategy will enhance the preparedness, improve detection capabilities, and ensure efficient response to agriculture and food systems after an agriculture and food emergency.

FDA coordinated the emergency response to 57 incidents including:

- 27 serious adverse or injury event incidents
- 18 natural disasters
- 12 man-made disasters

FDA HQ evaluated 4,245 consumer complaints including over 30 reports of suspected product tampering in FY 2015 to insure FDA's timely identification of and response to emergency safety concerns related to FDA-regulated products. FDA HQ worked diligently to develop, maintain, and coordinate an effective emergency response capability for public health emergencies by developing guidance detailing FDA's operational approach for responding to emergencies, including revising FDA's Emergency Operations Plan and Annexes, the FDA Joint Information Center Handbook, and the FDA Incident Management Handbook. These documents improve

understanding and communication across the agency and with the public during emergency responses; furthering public perception of the FDA's ability to respond in crisis situations.

In FY 2015, FDA HQ continued to provide and enhance a robust Geographic Information System (GIS) for the agency with improved mechanisms for mapping of FDA regulated firms in foreign countries and performed complex spatial analysis when events impacting FDA regulated products occurred. FDA HQ completed over 1,200 maps for 77 project requests, during the fiscal year.

Regulatory Policy and Guidance

Below are the regulations and guidances issued by FDA HQ in 2015. They help address various issues.[100]

Date	#	Title	Description
Nov 2015	FDA-2015-D-3638	Minutes of Institutional Review Board (IRB) Meetings	Draft guidance: Describes regulatory requirements and recommendations for preparing and maintaining meeting minutes.
July 2015	FDA-2011-D-0398	Food Safety (Shell Eggs)	Questions and Answers regarding the Final Rule, Prevention of Salmonella Enteritidis in Shell Eggs During Production, Storage, and Transportation
June 2015	FDA-2014-D-0052	Allergens	Food Allergen Labeling Exemption Petitions and Notifications
June 2015	FDA-2011-N-0144	Food Defense (Importers)	Draft Guidance: FDA's Voluntary Qualified Importer Program
May 2015	FDA-2015-D-0138	Food Defense (Recalls)	Draft Questions and Answers Regarding Mandatory Food Recalls
Mar 2015	FDA-2011-F-0172-0555	Labeling & Nutrition (Menu)	Nutrition Labeling of Standard Menu Items in Restaurants and Similar Retail Food Establishments; Small Entity Compliance Guide
Mar 2015	FDA-2011-F-0172	Labeling & Nutrition (Menu)	Nutrition Labeling of Standard Menu Items in Restaurants and Similar Retail Food Establishments; Small Entity Compliance Guide
Jan 2015	FDA-2015-D-0198-0002	Current Good Manufacturing Practice Requirements for Combination Products (Draft)	Further describes and explains the final rule on CGMP requirements for combination products (final rule as codified in 21 CFR part 4) that FDA issued on January 22, 2013

FDA HQ is coordinating with the National Institutes of Health (NIH) on the development of the final rule for clinical trial registration and submission of trial results to ClinicalTrials.gov. In addition, FDA continues to evaluate the impact of the proposed regulation on future FDA compliance and enforcement efforts related to violations of Title VIII of the Food and Drug Administration Amendments Act (FDAAA). FDA also provided technical assistance on sections

[100] For more information on guidance, please visit http://www.fda.gov/RegulatoryInformation/Guidances.

of the proposed 21st Century Cures legislation impacting ClinicalTrials.gov reporting requirements.

FDA HQ led efforts to amend FDA's regulations on acceptance of data for medical devices. Under the proposed rule, clinical investigations outside the US would be required to be conducted in accordance with good clinical practice, defined as a standard for the design, conduct, performance, monitoring, auditing, recording, analysis, and reporting of clinical trials in a way that provides assurance that the data and reported results are credible and accurate, and that the rights, safety, and well-being of trial subjects are protected.

The proposed rule also would revise (21 CFR 812) and (21 CFR 807 Subpart E) to address the acceptance of domestic clinical data, which are currently not described in these regulations. Clinical investigations conducted in the United States and submitted in support of investigational device exemption applications and premarket notification submissions would be required to comply with the human subject protection (21 CFR 50), institutional review board (21 CFR 56), and (21 CFR 812) regulations. FDA HQ has developed a draft guidance to accompany the final rule.

FDA HQ prepared the "Rare Pediatric Disease Priority Review Voucher Draft Guidance for Industry" in FY 2015. This guidance provides information on the implementation of section 908 of FDASIA whereby FDA will award priority review vouchers to sponsors of certain rare pediatric disease applications that meet the criteria specified.

FDA HQ led the review and drafting of detailed comments on various Health and Human Services' (HHS's) regulatory proposals including Common Rule Notice of Proposed Rulemaking (NPRM), published September 8, 2015. The goal of the NPRM is to facilitate low risk research and reduce burdens on sponsors, researchers, and IRBs while ensuring ethical oversight of clinical trials and protection of the rights, safety, and welfare of human subjects. FDA evaluated the impact of the NPRM's proposed revisions and other proposed guidance documents on FDA-regulated research and the extent to which the agency's regulations could be harmonized with the Common Rule given the FDA's and HHS's different legislative and regulatory mandates.

FDA HQ continues to collaborate with the Clinical Trials Transformation Initiative (CTTI) effort on several projects. Examples include efforts to improve:

- informed consent documents
- clinical investigator training and qualifications[101]
- use of centralized Institutional Review Board (IRB) review where appropriate.

FDA HQ sponsored a Pediatric Clinical Investigators Training meeting to help ensure that academic investigators understand their responsibilities when conducting product development trials involving children. FDA HQ is planning a similar two-day training session in 2016.

FDA HQ participated in the development of two cross-cutting guidance documents to incorporate content applicable to combination products. These are the "Guidance for Industry Providing Regulatory Submissions in Electronic Format —Certain Human Pharmaceutical Product Applications and Related Submissions Using the eCTD Specifications (2015)"and the

[101] Available at: http://www.ctti-clinicaltrials.org/what-we-do/study-start/gcp-training.

"Selection of the Appropriate Package Type Terms and Recommendations for Labeling Injectable Medical Products Packaged in Multiple-Dose, Single-Dose, and Single-Patient-Use Containers for Human Use" Draft Guidance (October 2015).

FDA HQ coordinated with the Association for the Advancement of Medical Instrumentation (AMMI) Combination Products Committee on development and publication of the AAMI TIR48:2015 that provided an industry reference on *the Application of the U.S. FDA's CGMP Final Rule on Combination Products*.

Medical Countermeasures Initiative Regulatory Science Program

FDA HQ provides funding for targeted research on projects aligned to the Public Health Emergency Countermeasures Enterprise. This research is focused on improving FDA's ability to perform science-based review of medical countermeasures (MCMs) designed to mitigate the effects of CBRN and emerging infectious disease threats such as pandemic influenza and Ebola virus disease. Notable accomplishments in FY 2014 and FY 2015 include developing a lung model based on 'organs-on-a-chip' technology to use in the development of drugs for acute radiation syndrome and the evaluation of a portable electroencephalogram (EEG) technology that could be used to detect brain injury in victims of traumatic events such as accidents or explosions.

FDA scientists also improved methods to test the quality of influenza and anthrax MCMs and developed a publically available microbial genomic reference sequence database and an antimicrobial resistant organism isolate bank that contains an initial set of panels of antimicrobial resistant bacteria with varying antimicrobial resistance profiles – available to diagnostic manufacturers, pharmaceutical developers and researches at no cost – that can help advance the development of diagnostic tests for biological threats including antimicrobial resistant bacteria. Additionally, FDA scientists have also responded to the Ebola epidemic in West Africa in multiple areas including investigating various methods for measuring Ebola vaccine efficacy and providing high-quality sequence data to better inform the development of vaccines, therapeutics, and diagnostic assays. FDA scientists were members of HHS's National Advisory Committee on Children and Disasters that submitted a report to the Assistant Secretary for Preparedness and Response on Healthcare Preparedness for Children in Disasters, which included a section on incentivizing industry for pediatric MCM development.

International Inspections

FDA has investigators based overseas within the foreign offices in China, India, and Latin America. These investigators provide FDA with the capability to respond quickly to emerging issues concerning the safety, efficacy, or quality of FDA-regulated products without the delays associated with international travel such as the time needed to obtain a visa. Investigators stationed in foreign offices also provide FDA with country-specific expertise regarding local industry practices and local culture.

In FY 2015, 28 percent of FDA inspections conducted in India (102 of the total 367 inspections) were performed by investigators based within FDA's India Office and on short term assignments. Similarly, 23 percent of FDA inspections conducted in China (105 of the total 455 inspections) were performed by investigators based in FDA's China Office and on short term assignments. In addition, FDA's Latin America Office, which began performing inspections in FY 2014, conducted 7 percent of inspections in that region (29 of the total 430 inspections) in FY 2015.

The China, India, and Latin America Offices routinely inform foreign counterpart authorities of FDA inspections in their countries and invite the foreign authorities to observe the FDA inspections. Foreign regulatory authorities often accept these invitations, which provide learning experiences for the foreign authorities.

FDA's India Office and the Indian drug regulatory authority will collect data pertaining to either regulatory agency's observations of the other's inspections. This data-gathering exercise will facilitate data analyses for developing a better understanding of current inspectional and regulatory practices of each regulatory agency and developing strategies to better cooperate on matters of mutual regulatory concern.

The Latin America Office has conducted concurrent inspections with foreign regulatory authorities. In such inspections, the Latin America Office and the foreign regulatory authority simultaneously conduct their own inspections of an establishment. During these inspections, there is constant communication and discussion between the regulatory authorities. At times during the concurrent inspections, certain foreign authorities take regulatory action on the spot – even ordering the destruction of potentially contaminated products - when conditions that pose a serious risk to the health of consumers are encountered. The Latin America Office also conducted concurrent environmental assessments with foreign regulatory authorities during FY 2015. "Environmental assessments" are investigations to determine how the "environment" contributed to the introduction and transmission of pathogens or other hazards that caused illness or contamination; FDA conducts environmental assessments to learn the probable cause(s) of an outbreak of foodborne illness or a food contamination event and uses that information to identify preventive controls to prevent reoccurrence of an outbreak or contamination event.

After inspections, the China Office has shared information, as appropriate under current Arrangements, with regulatory counterpart organizations in China. This has resulted in actions by the regulatory counterpart organizations to follow up on violations observed by FDA. For example, after the China Office notified FDA's Chinese counterpart organization of significant violations found during two 2015 inspections at pharmaceutical manufacturers, the Chinese counterpart organization instructed its provincial regulatory authorities to conduct their own investigations. In another case, after the China Office notified FDA's Chinese counterpart organization about regulatory actions, such as Warning Letters and Import Alerts, taken by the FDA against Chinese pharmaceutical companies, the Chinese counterpart organization instructed provincial regulatory authorities to conduct follow-up inspections. The Chinese regulatory authority told FDA's China Office that they considered the information valuable and indicative of risk factors and would like to work with FDA to solve the problems.

In addition to conducting inspections, FDA's overseas offices with and without investigators contribute to FDA's international inspections by providing pre-inspection briefings, coordinating with foreign competent authorities and U.S. Government interagency personnel in-country, and analyzing reports/audits by regulatory counterparts to aid in facility selection.

International Partnerships

The ability to share non-public information with foreign regulatory counterparts is key to FDA's international cooperation and leveraging, and enables FDA to obtain foreign regulatory information that assists FDA decision making. In FY 2015, FDA implemented 10 new Confidentiality Commitments to promote information-sharing with foreign counterpart agencies and international organizations.

FDA also signed six arrangements to further cooperative activities with foreign counterparts. In FY 2015, FDA signed two Implementing Arrangements with its Chinese regulatory counterparts that outline commitments regarding inspections of food and drug facilities. Since the signing of the two Implementing Arrangements, FDA has received visas for 10 new staff members, some of whose visas had been previously delayed. Additionally, cooperation and the exchange of regulatory enforcement information have increased. For example, in FY 2015 Chinese regulatory counterparts voluntarily shared their inspection findings regarding adulterated gingko leaf extracts discovered during their nationwide campaign to crack down on adulterated medical products. In addition, in August FY 2015 the Chinese regulatory authority for the first time notified FDA's China Office about their upcoming inspections to be conducted at a pharmaceutical company in Dallas, Texas. The Chinese regulatory counterpart also assisted the China Office when China Office investigators encountered difficulties in entering a manufacturing facility.

In addition, in FY 2015 FDA signed a Memorandum of Understanding (MOU) with Export Inspection Council of India that will further cooperative activities in the area of food safety, an MOU with the Republic of Korea addressing the safety of shellfish shipped to the United States, a Letter of Intent with the French government reinforcing law enforcement cooperation in the public health arena, and an overarching Cooperative Arrangement with New Zealand related to the safety and defense of foods for human consumption and animal feeds..

In FY 2015, FDA participated in a number of Trans-Pacific Partnership (TPP) and Transatlantic Trade and Investment Partnership (TTIP) negotiating rounds to ensure public health, consumer safety and FDA's mandates were reflected in U.S. Government policy positions and incorporated into the negotiating texts for the agreements. FDA also advised and supported the U.S. Trade Representative during Ministerial-level negotiations for specific chapters of the TPP agreement. Through this effort, FDA was able to ensure that nothing in the TPP agreement undermines FDA's authorities.

Building on Confidentiality Commitments, the FDA through its Latin America Office, CFSAN, and ORA implemented the U.S.-Mexico Produce Safety Partnership (PSP). Established through a Statement of Intent in July 2014, the partnership completed its first year of activities in FY 2015. Through working groups on produce safety system information sharing, education and outreach, training of auditors and inspectors, laboratory collaboration, and outbreak response, this partnership provided opportunities for both FDA and the Mexican food safety regulators to learn and enhance the understanding of how each nation currently operates its food safety systems in support of the goal of achieving high rates of compliance with standards for the safety of fresh and minimally processed produce of each nation.

In FY 2015, FDA HQ has coordinated seven agency-wide emergency responses in collaboration with the International Food Safety Authorities Network (INFOSAN), involving dietary supplements, food products (almonds, salmon, caramel apples, ice cream), and a spice (ground cumin).

International Exchange of Information and Sharing of Expertise

FDA's foreign offices facilitate the exchange of data, information, and technical expertise with foreign regulatory counterparts to protect consumers and leverage resources. The FDA's foreign offices also work with global health organizations, academia, regulated industry, and other U.S. Government agencies. Such activities are essential to building strong working relationships, and

strengthening foreign regulatory capabilities so that they can align with FDA and help assure the safety of foreign products that are exported to the United States. International outreach also helps inform industry and other stakeholders about FDA requirements so that they can ensure their products exported to the United States meet those requirements.

FDA's India Office partners with Indian regulators to train them on food- and drug-related issues and inspectional techniques, good manufacturing practices, and the detection of data integrity issues. The Office is also in dialogue with Indian regulators to offer training on food safety and labeling. In addition, the India Office meets with the leadership of the food and drug industries, facilitated by stakeholder organizations, to address matters pertaining to current good manufacturing practices.

The Latin American Office's Mexico post has facilitated information exchange, training, pilot activities and other cooperative programs with FDA's two Mexican counterpart agencies. One form of information exchange focuses on products that do not conform to product standards and may pose a risk to human health. In response, one of the Mexican counterpart agencies implemented an internal procedure to follow up on FDA information, as a mode to prevent the commercialization of risky products, seize contaminated products, and close manufacturing facilities and warehouses.

In FY 2015, FDA's Latin America Office delivered 10 training modules, in conjunction with a Mexican trade association, that focus on FDA drug regulations, good manufacturing practices, data integrity and inspections. The Latin America Office also conducted conferences in collaboration with other government agencies and academia on good manufacturing practices, data integrity, medical devices regulation, drugs and medical devices import-export, and counterfeit drugs.

The Europe Office helped facilitate a decision by FDA, the European Medicines Agency (EMA), and the European Commission (EC) to establish a new "cluster" (information sharing group), on patient engagement to share experience and best practices regarding the involvement of patients in the development, evaluation and post-authorization activities related to medicines. This adds to the 10 previously-established FDA-EMA clusters.

The China Office's areas of focus in FY 2015 included regulation and enforcement of food and medical products, good manufacturing practices, and integrity of the data used to support product applications. Examples of specific engagement include implementing collaborative programs with Chinese regulatory counterparts, active engagement and partnerships with universities, and promoting FDA initiatives. The China Office also continued to promote aquaculture safety. Of particular note, to assist Chinese regulators in expanding and restructuring their regulatory systems for medical products and food safety, the China Office held a series of meetings with Chinese regulators to increase their knowledge of FDA's regulatory systems. In the data integrity area, as a result of a series of China Office workshops, firms are upgrading equipment and software and conducting their own investigations to address potential data integrity issues; the Chinese regulatory authority, which previously published new guidelines to address electronic data issues, is working on additional guidelines. Lastly, the China and Europe Offices worked closely with CFSAN and OFVM to establish a collaborative mechanism with Directorate General Health and Safety of the European Commission, and China's General Administration of Quality Supervision, Inspection and Quarantine to enhance further cooperation on scientific and technical cooperation and exchange.

China Safety Initiative
In FY 2015, FDA expanded upon its efforts to regulate the quality and safety of products entering the U.S. from China through the China Safety Initiative (CSI). The primary activity of the CSI is to expand the number of FDA investigators in China, which FDA was able to do in FY 2015. Additionally, the CSI is funding a project to verify manufacturing and production sites of FDA-regulated commodities in China to better assess inspection prioritization needs. CSI also funds projects to develop innovative methodologies to monitor and analyze publicly-available private sector and social media data sources that have not been used by FDA traditionally, to provide early signal detection of foodborne illness outbreaks or adverse events in order to better inform Agency decision-making regarding product safety and quality.

Regulatory Cooperation Council
In FY 2015, FDA began work on a new phase of the Regulatory Cooperation Council (RCC). The RCC is a Canadian-United States initiative to promote economic growth and job creation through increased regulatory transparency and cooperation In FY 2015, FDA and Canadian counterpart organizations identified areas of mutual regulatory interest and public health benefit for possible convergence in the short, medium, and long terms and developed five work plans in support of this initiative.

Ebola Response
FDA HQ led extensive intra- and inter-agency coordination and facilitated international coordination of response activities to the Ebola epidemic in West Africa. FDA HQ facilitated the expedited development and availability of medical countermeasures (MCMs) — including vaccines, drugs, protective equipment, and diagnostic tests — for Ebola, including authorizing the use of ten investigational diagnostic tests for Ebola under our Emergency Use Authorization authority. FDA HQ supported regulatory science programs to help facilitate Ebola MCM development, and developed policies for the development, use, and export of investigational MCMs. FDA HQ provided ongoing review and consultation on the care of Ebola patients receiving treatment in the United States. FDA HQ helped design an innovative and robust common clinical trial design protocol to evaluate the most promising investigational MCMs for Ebola and held an international workshop on clinical trial designs in emerging infectious diseases to leverage the experience gained from the Ebola outbreak and other conditions. FDA HQ issued six warning letters to firms marketing products with unsubstantiated or fraudulent claims of treatment or prevention of Ebola. FDA HQ also led domestic and supported international policy development activities and provided technical support and scientific advice to the World Health Organization (WHO) and international regulatory counterparts (including counterparts in affected West African countries).

Improve and Safeguard Access

FDA HQ serves as the agency focal point for special programs and initiatives that are cross-cutting and clinical, scientific, and regulatory in nature. FDA HQ promotes high standards of scientific integrity to ensure ethical and responsible research practices, such as human subjects protection, and offers support for accelerated research and development for medical products to improve greater access to safe and effective medical products for children, and rare disease populations.

FDA HQ provides for the coordination of internal and external review of pediatric science, safety, ethical and international issues as mandated by law and agency activities. FDA HQ

schedules the scientific agenda and administers the Pediatric Advisory Committee, the Pediatric Ethics Subcommittee, and the Neonatology Subcommittee. FDA HQ also works with CDER and CBER in developing scientific workshops to Advance the Development of Pediatric Therapeutics (ADEPT), the second of which, on neurocognitive outcomes, occurred in April 2015, with a third workshop on Long Term Pediatric Safety Studies scheduled for April 2016.

FDA HQ advances regulatory science needed to evaluate new products, collaborating with our colleagues in the private, public, and academic settings to facilitate product development and ensuring that our product review process is effective and efficient. FDA HQ is dedicated to improve review efficiency through data standardization and data integrity requirements. FDA HQ will continue to increase consideration of health disparities and health outcomes in regulatory decision-making.

FDA HQ oversees the management and operations of FDA's 50 scientific advisory committees and panels. FDA's advisory committees and panels provide expert, independent advice to the agency on public health issues including product approvals, post-marketing safety, emerging policy matters, tobacco product issues, and food safety.

Within the area of Improve and Safeguard Access, FDA provides Safety and Quality as well as Regulatory Science. The following, selected accomplishments demonstrate FDA HQ's delivery of its regulatory and public health responsibilities within the context of current priorities.[102]

Rare Disease Designations, Rare Pediatric Disease Determinations, and Grants
In FY 2015, FDA HQ

- reviewed a record 440 first-time requests for orphan drug designation and designated 355 promising drugs and biological products for rare diseases
- reviewed 21 first-time requests for Humanitarian Use Device designations and designated 10 promising devices for rare diseases and conditions
- reviewed 31 Rare Pediatric Disease Designation and Consultation Requests and designated or granted 21 drugs and biologics for rare pediatric diseases[103]
- funded 18 new grant awards and 67 ongoing grants funding clinical studies of promising therapies for rare diseases
- funded 8 pediatric device consortia to provide multidisciplinary advice and funding to assist pediatric device innovators Development of Neonatal Program.

FDA HQ, working with CDER, has worked to stimulate product development for neonates, a vulnerable population which has not benefited from existing legislative incentives. These efforts include:

- enhancing communication on specific scientific issues between FDA scientists and external neonatal groups including developing a research program involving academic researchers' evaluation of endpoints for neonates with pulmonary arterial hypertension
- establishing a neonatology team, led by a board-certified neonatologist, to facilitate and expand the Agency's neonatal product development efforts

[102] Please visit http://www.fda.gov/ for additional program information and detailed news items.
[103] For more information regarding product designations please see the Office of Orphan Products Development narrative.

- supporting the development of a public-private partnership to foster neonatal product development (International Neonatal Consortium) that has its third workshop planned for March 2016.

Premarket and Postmarket Support

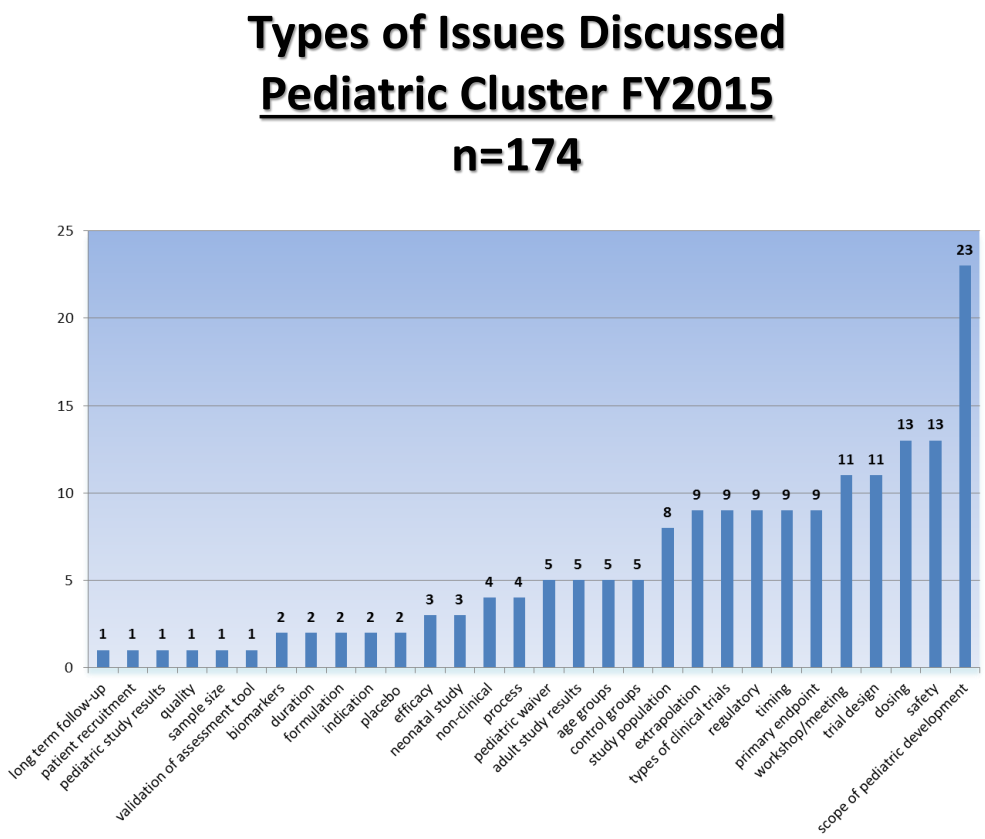
In FY 2015, FDA HQ responded to approximately 650 requests for combination product premarket review assistance from the FDA staff and regulated industry (including products that are on the shortage list). FDA HQ issued 17 formal combination product requests for designation decisions with 100 percent of these decisions meeting the 60-day statutory decision time requirement. FDA HQ provided timely informal jurisdictional assistance for approximately 248 separate informal inquiries. FDA HQ provided clarification and support for 57 separate combination product post market activities.

FDA HQ promoted high standards of scientific integrity to ensure ethical and responsible research practices by providing expert ethical opinions to agency Centers and Offices for more than 100 pediatric ethics issues, more than 600 pediatric development programs, and nearly 50 adult ethics issues. These ethical consultations have included issues related to the development of FDA policies for emergencies and crises as seen in the recent Ebola epidemic affecting West Africa and research involving the exception from informed consent requirements for emergency research.

FDA HQ enhanced the efficiency of its pediatric safety review process which examines and presents the post market pediatric adverse events and safety reporting issues to Pediatric Advisory Committee (PAC). Over 300 products have been reviewed by the PAC. In FY 2015, 34 pediatric-focused product safety reviews (drugs, biologics, vaccine and device reviews) were reviewed by FDA's PAC. Over the last five years the PAC has also provided safety assessments on Humanitarian Device Exemptions that have asked for an exclusion from the limitation on profit-making and this will become an increasing part of the workload required to be performed by this committee.

Pediatric Coordination

FDA HQ, working in conjunction with Center subject matter experts through the Pediatric Cluster, met to resolve pediatric scientific differences between European Medicines Agency (EMA) and FDA on 174 issues in FY 2015. Of the 174 issues discussed with the EMA, harmonization was achieved for 80 percent. Examples of issues discussed included study design, endpoints, and safety concerns (see graphic).



Promote Informed Decisions

FDA HQ leads the effort to enhance FDA's communications to better serve the public. FDA HQ manages the communications to key stakeholders including the media, Congress, health professionals, patient advocates, and the general public. FDA HQ ensures important information about the benefits and risks of products is readily available in plain language using different communication methods, such as social media and the FDA website. FDA HQ also educates the public and encourages healthy choices by providing more general information about nutrition and tobacco prevention.

Within the area of Promote Informed Decisions, FDA provides Smart Regulation, Safety and Quality, and Regulatory Science. The following, selected accomplishments demonstrate FDA HQ's delivery of its regulatory and public health responsibilities within the context of current priorities.[104]

Streamlining Access to Investigational Therapies for Patients with Life-Threatening Illnesses

Since the early years of the AIDS epidemic, FDA has authorized "compassionate use" of unapproved investigational drugs. However, the application form was too complex: it called for 26 separate elements of information, seven attachments, and was estimated to take 100 hours to complete. FDA initiated an agency-wide effort to simplify the application form and process, and lead the group to complete its work in just seven months. In February 2015, FDA announced the

[104] Please visit http://www.fda.gov/for additional program information and detailed news items.

availability of a new, much simpler draft form that should accelerate patient access to investigational drugs, when appropriate. The new draft form, when finalized, will require only eight elements of information and a single attachment. We estimate that physicians will be able to complete the finalized version of the form in just 45 minutes. Additionally, to further assist the physician seeking access to an experimental therapy, we redesigned FDA's website to make it easier to navigate and to explain the new proposed process in detail. The New York Times editorial board hailed the new form as a "breathtaking reduction in red tape."

Communication with Stakeholders

Through 2015, FDA HQ had optimized over 35,000 of the most popular web pages on FDA.gov for mobile devices, to better serve site visitors that accessed the site through mobile devices (over 35 percent of all traffic).

FDA HQ produced and promoted more than 40 Consumer Updates (CUs) and increased subscriptions by 19 percent. FDA HQ published 116 FDA Voice Blogs and increased website page views by 32 percent.

FDA HQ conducted over 200 stakeholder meetings, increased external stakeholder communications by over 13 percent, with over 576,130 subscribers to our multiple communications vehicles such as MedWatch Safety Alerts, various newsletters, and disease-specific subscriptions. FDA HQ has trained and recruited over 200 patient representatives to advise FDA, manages an internal MedWatch Council, which generates new policies on the reporting impact of safety information to the public.

Annually, FDA HQ responds to approximately 1,500 inquiries about human subject protection, informed consent, and best practices for the conduct of clinical trials. Archives of these questions and answers are available on FDA's website.[105]

Strengthen Organizational Excellence

FDA HQ ensures the timely and effective implementation of operations and the high quality delivery of services across the agency and centers. FDA HQ plans and manages all resources including budget, financial management, human resources, information technology, facilities, security and safety, ethics, equal employment opportunity, and acquisitions activities. FDA HQ is committed to developing its workforce, recruiting, retaining, and strategically managing diversity. In FY 2015, FDA retained 80 percent of the 10 Commissioner's Fellowship Program graduates. FDA HQ invests in infrastructure, evolving our management systems and practices to ensure accountability for accomplishing meaningful results which enhance productivity and workforce capabilities.

Within the area of Organizational Excellence, FDA provides Stewardship. The following, selected accomplishments demonstrate FDA HQ's delivery of its regulatory and public health responsibilities within the context of current priorities.[106]

OpenFDA

OpenFDA is an FDA initiative to provide software developers and researchers Application Programming Interfaces (APIs) to a number of high-value structured datasets, including adverse

[105] Replies to Inquiries to FDA on Good Clinical Practice. http://www.fda.gov/ScienceResearch/SpecialTopics/RunningClinicalTrials/RepliestoInquiriestoFDAonGoodClinicalPractice/default.htm.
[106] Please visit http://www.fda.gov/ for additional program information and detailed news items.

events, product labeling, and recall enforcement reports. Since the launch, on June 2, 2014, OpenFDA has received over 20 million data calls, half of which were from outside the US. There are more than 6,000 registered users, 21,000 connected systems worldwide, and dozens of new software applications that the community has built.

OpenFDA provides access to: Adverse events such as FDA's publically available drug adverse event and medication error reports (over 4.9 million records 2004 from 2015), and medical device adverse event reports (over 4.5 million records from 1991 to 2015); recalls and enforcement report data, containing information gathered from public notices about certain recalls of FDA-regulated products (over 20,000 recalls records from 2012 to 2015); and Structured Product Labeling for FDA-regulated human drugs (prescription or over the counter) and biologics (over 67,000 records from 2009 to 2015).

FUNDING HISTORY

Fiscal Year	Program Level	Budget Authority	User Fees
FY 2013 Actual	$220,035,000	$160,112,000	$59,923,000
FY 2014 Actual	$244,990,000	$172,021,000	$72,969,000
FY 2015 Actual	$261,099,000	$173,292,000	$87,807,000
FY 2016 Enacted	$289,562,000	$181,587,000	$107,975,000
FY 2017 President's Budget	$298,682,000	$178,287,000	$120,395,000

BUDGET REQUEST

The FY 2017 Budget Request is $298,682, 000 of which $178,287, 000 is budget authority and $120,395,000 is user fees. The budget authority decreases by $3,300, 000 compared to the FY 2016 Enacted level and user fees increase by $12,420, 000. The FY 2017 Budget request allows FDA to continue overall performance in the Strategic Goal Areas of Enhanced Oversight, Improve and Safeguard Access, Promote Informed Decisions, and Strengthen Organizational Excellence.

FDA HQ will continue to provide policy direction and oversight, advance scientific development, and provide oversight of the global supply chain. FDA HQ will continue working to increase transparency and accountability in the supply chain, developing better enforcement and regulatory tools, encouraging greater responsibility by industry, and enhancing collaboration with international regulatory counterparts and other third parties. FDA HQ along with the Centers and Offices, will evaluate and improve the effectiveness of preventive control standards, and advance the development of predictive safety models. FDA HQ will coordinate across FDA to develop improved methods for rapidly detecting, investigating, and stopping foodborne contaminants, as well as develop comprehensive regulatory approaches for integrating pre- and post-approval and compliance functions. The request continues to include $10 million to support the China Initiative.

In FY 2016, FDA HQ will utilize the $5 million increase provided in FY 2016 to bolster the important ongoing development and utilization of a targeted, risk-based, and efficient inspection model for foreign high risk facilities. The funding will support efforts to develop key systems,

processes, and data sources in different commodity areas including food safety and medical products. These efforts may include mutual reliance or other methods to leverage inspection and site data from foreign regulators. Additionally, these efforts will support the incorporation of commercially available information on high-risk establishments for onsite verifications. The increased funding will drive significant progress in achieving these multi-year objectives, but without these funds in FY 2017 the pace and scale of implementation will most likely be negatively affected.

FDA HQ will continue to advance international initiatives to ensure FDA's capability to work with foreign regulatory stakeholders in response to international emergencies involving or impacting FDA-regulated products, and to share information with such entities during emergencies to strengthen FDA's global product safety net. FDA will continue to provide improved collaboration and information sharing tools among FDA and its domestic and international partners regarding response efforts to coordinate and disseminate critical information during emergency incident response and subsequent product recalls and/or alerts. FDA will also continue to improve the accuracy of firm manufacturing site data to improve inspection planning.

FDA HQ will continue to enhance agency preparedness and response capabilities through intra- and inter-agency exercises, plan development and execution, standard operating procedures, and enhanced incident management systems in order to improve the overall operation and effectiveness of FDA's emergency response. FDA will also provide surveillance and signal monitoring, including FDA's Emergency Call Center and Consumer Complaint reporting and monitoring functions

FDA HQ will explore and test interdisciplinary approaches of integrating qualitative and quantitative social science data with traditional and social media analysis and pharmaco-epidemiological data to assess communication effectiveness in the use of regulated products. FDA HQ will analyze the intersection of economic and behavioral effects of health and safety information about regulated products.

In addition, FDA HQ will continue to provide program direction and administrative services, ensuring FDA's public health mission is managed effectively and efficiently. FDA HQ is committed to delivering cutting-edge technology, innovation, and support to all stakeholders.

BUDGET AUTHORITY

Medical Product Safety and Availability: $91.1 million (+$1.7 million)[107]

Precision Medicine: $0.2 million

FDA's precision medicine initiative provides a crowd-sourced, cloud-based platform to advance regulatory science around NGS-based analytical tools and datasets. This platform plays an important role in the Precision Medicine Initiative by engaging the community of NGS-based test providers, standards-making bodies, pharmaceutical and biotechnology companies, healthcare providers, academic medical centers, research consortia and patient advocacy groups to determine the best currently available approach to assessing the accuracy and reproducibility of NGS analytical software. The $200,000 in FY 2017 will be used to monitor portal usage, support community member use and engage, support, and steer the community toward

[107] Includes restoration of $1.5 million transferred from FDA to HHS Office of the Inspector General.

innovation in regulatory science. Some specific targeted activities will include: community code-a-thons and community challenges around challenging questions such as how common bioinformatics workflows perform on known reference data sets and how comparison tools and approaches can be improved to better compare results.

USER FEES

Current Law User Fees: +$0.3 million

FDA HQ will utilize these current law user fees to provide support to FDA Centers and Offices. FDA HQ will provide strategic coordination, direction, and oversight across FDA UF programs.

Proposed User Fees: +$12.1 million

The FDA HQ request includes an increase of $12.1 million for proposed user fees, which will allow FDA to fulfill its mission of protecting the public health by ensuring the safety and proper labeling of domestic and imported foods, cosmetics, and allowing for increased surveillance of FDA-regulated products at express courier hubs.

PERFORMANCE

The FDA Headquarters' performance measures focus on emergency response, women's health, science, global cooperation, premarket application review of orphan, pediatric and combination products, outreach, and organization efficiency, as detailed in the following table.

Measure	Year and Most Recent Result / Target for Recent Result (Summary of Result)	FY 2016 Target	FY 2017 Target	FY 2017 +/- FY 2016
292201: Improve FDA's ability to respond quickly and efficiently to crises and emergencies that involve FDA regulated products. *(Output)*	Maintained 98.7% efficiency on response to calls to the FDA After Hours Call Center. Successfully coordinated 57 incidents involving FDA regulated products during the year. Participated in six exercises during the year. Conducted 12 tests per year of FDA's system for contacting agency officials nationwide after-hours in the event of an emergency. (All Targets Met or Exceeded)	Maintain 95% efficiency on response to calls to the FDA After Hours Call Center. Successfully coordinate 20 incidents involving FDA regulated products during the year. Participate in seven exercises during the year.	Develop 50 mapping products in support of FDA's emergency preparedness, response, and recovery activities. Successfully coordinate 20 incidents involving FDA regulated products during the year. Participate in nine exercises during the year.	+2
291305: Number of electronic and print communications disseminated to women's health stakeholders. *(Output)*	FY 2015: 35 Target: 25 (Target Exceeded)	39	39	maintain

Measure	Year and Most Recent Result / Target for Recent Result (Summary of Result)	FY 2016 Target	FY 2017 Target	FY 2017 +/- FY 2016
293206: Promote innovation and predictability in the development of safe and effective nanotechnology-based products by establishing scientific standards and evaluation frameworks to guide nanotechnology-related regulatory decisions. *(Outcome)*	FY 2015: FDA completed annual milestones on 6 more intramural research projects under the Nanotechnology CORES program to promote cross-center and external collaborative regulatory science research opportunities, focusing on studies evaluating nano-materials. (Target Met)	30 CORES projects with completed annual milestones	36 CORES projects with completed annual milestones	+6
291101: Percentage of Fellows retained at FDA after completing the Fellowship program. *(Outcome)*	FY 2015: 80% Target: 40% (Target Exceeded)	50%	50%	Maintain
293205: Percentage of requests for combination product designations processed within the 60 day statutory requirement. *(Output)*	FY 2015: 100% Target: 95% (Target Exceeded)	95%	95%	Maintain
293203: Number of pediatric scientific, ethical, product, and product class issues identified through collaboration with the 27 European Union countries coordinated with the EMA, Japan, and Canada, with Australia as observers. *(Output)*	FY 2015: 174 Target: 40 (Target Exceeded)	50	50	Maintain
293204: Number of medical products studied in children with labeling changes and safety reviews completed and presented to FDA's Pediatric Advisory Committee. *(Output)*	FY 2015: 34 Target: 30 (Target Exceeded)	30	30	Maintain

Measure	Year and Most Recent Result / Target for Recent Result (Summary of Result)	FY 2016 Target	FY 2017 Target	FY 2017 +/- FY 2016
292301: The number of new multi-faceted educational programs for patient advocates and health professionals on major FDA public health issues. *(Output)*	FY 2015: 4 Target: 4 (Target Met)	4	4	Maintain
291306: Number of collaborative actions taken based upon meaningful analyses of the global regulatory landscape. *(Output)*	FY 2015: 27 Target: 25 (Target Exceeded)	25	25	Maintain
291406: Percentage of invoices issued on time within predefined dates in the month. *(Output)*	FY 2015: 100% Target: 98% (Target Exceeded)	98%	98%	Maintain
293207: Percentage of reviews of first-time and amended orphan drug designation applications completed in 90 days or less. *(Output)*	FY 2015: 90% Target: 75% (Target Exceeded)	75%	75%	Maintain
293208: Percentage of Humanitarian Use Device designation reviews completed in 45 days or less. *(Output)*	FY 2015: 100% Target: 95% (Target Exceeded)	95%	95%	Maintain

The following selected items highlight notable results and trends detailed in the performance table.

Nanotechnology Development

For the FDA, a science-based regulatory agency whose mission is to protect and promote public health, nanotechnology poses regulatory challenges that are inherent in emerging technologies. Like many emerging technologies, nanotechnology can potentially benefit medicine and other FDA-regulated product areas, but the risks to human and animal health are not yet completely identified or understood. Establishing scientific standards and evaluation frameworks to guide nanotechnology-related regulatory decisions will promote innovation and predictability in the development of safe and effective nanotechnology-based products. Collaborative Opportunities for Research Excellence in Science (CORES) projects are designed to produce internal and external reports and testing methods that FDA staff can use to

evaluate FDA regulated products that contain or use nanotechnology. From 2011 to 2015, FDA has completed annual milestones on 24 CORES projects, and plans to complete 30 annual milestones by the end of FY 2016, and 36 by the end of FY 2017. Because some of the projects are multi-year projects, completing the annual milestones for each project is defined as complete for that year.

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INFRASTRUCTURE – GSA RENT, OTHER RENT, AND WHITE OAK

(Dollars in Thousands)	FY 2015 Final	FY 2015 Actuals	FY 2016 Enacted	FY 2017 President's Budget	FY 2017 +/- FY 2016
FDA White Oak Consolidation	**47,116**	**46,687**	**52,346**	**47,461**	**-4,885**
Budget Authority	***43,044***	***43,044***	***48,044***	***43,044***	***-5,000***
Prescription Drug (PDUFA)	***4,072***	***3,643***	***4,302***	***4,417***	***115***
Other Rent and Rent Related	**116,406**	**115,424**	**119,560**	**123,928**	**4,368**
Budget Authority	***72,943***	***72,943***	***73,484***	***71,943***	-1,541
User Fees	***43,463***	***42,481***	***46,076***	***51,985***	***5,909***
Prescription Drug (PDUFA)	*28,134*	*21,729*	*29,724*	*30,519*	795
Medical Device (MDUFA)	*4,027*	*4,354*	*4,558*	*4,425*	-133
Generic Drug (GDUFA)	*6,730*	*10,077*	*6,862*	*6,988*	126
Biosimilars (BsUFA)	*602*	*67*	*617*	*632*	15
Animal Drug (ADUFA)	*225*	*737*	*228*	*230*	2
Animal Generic Drug (AGDUFA)	*69*	*145*	*97*	*104*	7
Family Smoking Prevention and Tobacco Control Act	*3,233*	*5,372*	*3,502*	*6,250*	2,748
Food and Feed Recall	*43*	---	*43*	*43*	---
Food Reinspection	*204*	---	*204*	*204*	---
Voluntary Qualified Importer Program	*170*	---	*170*	*170*	---
Third Party Auditor Program	---	---	*45*	*45*	---
Outsourcing Facility	*26*	---	*26*	*26*	---
Food Facility Registration and Inspection	---	---	---	*843*	843
Food Import	---	---	---	*702*	702
International Courier	---	---	---	*192*	192
Cosmetics	---	---	---	*545*	545
Food Contact Substance Notification	---	---	---	*67*	67
GSA Rental Payments	**228,428**	**219,966**	**239,105**	**240,205**	**1,100**
Budget Authority	***168,882***	***168,882***	***176,683***	***170,208***	-6,475
User Fees	***59,546***	***51,084***	***62,422***	***69,997***	***7,575***
Prescription Drug (PDUFA)	*24,147*	*27,390*	*25,512*	*26,194*	682
Medical Device (MDUFA)	*7,058*	*1,280*	*7,978*	*7,743*	-235
Generic Drug (GDUFA)	*14,421*	*13,179*	*14,705*	*14,974*	269
Biosimilars (BsUFA)	*1,054*	*117*	*1,080*	*1,107*	27
Animal Drug (ADUFA)	*1,123*	*477*	*1,141*	*1,149*	8
Animal Generic Drug (AGDUFA)	*417*	*159*	*583*	*622*	39
Family Smoking Prevention and Tobacco Control Act	*10,572*	*8,482*	*10,592*	*13,280*	2,688
Food and Feed Recall	*73*	---	*73*	*73*	---
Food Reinspection	*348*	---	*348*	*348*	---
Voluntary Qualified Importer Program	*290*	---	*290*	*290*	---
Third Party Auditor Program	---	---	*77*	*77*	---
Outsourcing Facility	*43*	---	*43*	*43*	---
Food Facility Registration and Inspection	---	---	---	*1,495*	1,495
Food Import	---	---	---	*1,197*	1,197
International Courier	---	---	---	*332*	332
Cosmetics	---	---	---	*955*	955
Food Contact Substance Notification	---	---	---	*118*	118

Authorizing Legislation: The Federal Food Drug and Cosmetic Act (21 U.S.C. 321-399); Radiation Control for Health and Safety Act (21 U.S.C. 360hh-360ss); The Federal Import Milk Act (21 U.S.C. 142-149); Public Health Service Act (42 U.S.C. 201, et seq.); Foods Additives Amendments of 1958; Color Additives Amendments of 1960; Animal Drug Amendments (21 U.S.C. 360b); Controlled Substances Act (21 U.S.C. 801-830); The Fair Packaging and Labeling Act (15 U.S.C. 1451-1461); Safe Drinking Water Act (21 U.S.C. 349); Saccharin Study and Labeling Act; Federal Anti-Tampering Act (18 U.S.C. 1365); Medical Device Amendments of 1976; Infant Formula Act of 1980; Drug Enforcement, Education, and Control Act of 1986; Generic Animal Drug and Patent Term Restoration Act; Prescription

Drug Marketing Act of 1987; Clinical Laboratory Improvement Amendments of 1988 (42 U.S.C. 201); Nutrition Labeling and Education Act of 1990; Prescription Drug Amendments of 1992; Safe Medical Device Amendments of 1992; Dietary Supplement Health and Education Act of 1994; Animal Medicinal Drug Use Clarification Act of 1994; Animal Drug Availability Act of 1996; Food Quality Protection Act of 1996; Federal Tea Tasters Repeal Act (42 U.S.C. 41); Safe Drinking Water Act Amendments of 1996 (21 U.S.C. 349); Food and Drug Administration Modernization Act of 1997; Antimicrobial Regulation Technical Corrections Act of 1998; Medical Device User Fee and Modernization Act of 2002; Public Health Security and Bioterrorism Preparedness and Response Act of 2002; Animal Drug User Fee Act of 2003 (21 U.S.C. 379j-11 - 379j-12); Project Bioshield Act of 2004 (21 U.S.C.360bbb-3); Minor Use and Minor Species Animal Health Act of 2004; Food Allergy Labeling and Consumer Protection Act of 2004 Medical Device User Fee Stabilization Act of 2005; Sanitary Food Transportation Act of 2005 Dietary Supplement and Nonprescription Drug and Consumer Protection Act (21 U.S.C. 379aa-1); Food and Drug Administration Amendments Act of 2007; The Family Smoking Prevention and Tobacco Control Act of 2009 (P.L. 111-31); Protecting Patients and Affordable Care Act of 2010; The Federal Cigarette Labeling and Advertising Act (15 U.S.C. 1333); FDA Food Safety Modernization Act, Public Law 111-353 (January 4, 2011); The Food and Drug Administration Safety and Innovation Act (P.L. 112-144); and the Drug Quality and Security Act (2013)

Allocation Methods: Direct Federal/Intramural

PROGRAM DESCRIPTION AND ACCOMPLISHMENTS

The Infrastructure Program supports FDA's mission of protecting the public health by providing secure and cost-effective office and laboratory space to perform mission-critical work. The Infrastructure Program consists of:

- General Services Administration (GSA) Rental Payments
- Other Rent and Rent-Related Activities
- White Oak.

The Infrastructure Program ensures that FDA's offices and labs across the country – and a fully integrated headquarters campus – are functioning to enable FDA to carry out its mission and respond to food safety and medical product emergencies. Investing in FDA's facility priorities provides the infrastructure and scientific capabilities necessary to ensure FDA can achieve the regulatory responsibilities, strategic priorities, and program initiatives outlined in this document. Programmatic funds may also support improvements critical to FDA's mission.

As FDA strategically manages its infrastructure, it focuses on creating high quality work environments, optimizing the use of taxpayer dollars, enhancing productivity, and ensuring efficient operations to protect the public's health. For example, FDA ensures the appropriate information regarding space needs to support escalating priorities is communicated to the Department in the FDA Five-Year Timeline (FYTL) for inclusion in the "Reduce the Footprint" Plan that HHS submits to the Office of Management and Budget (OMB).

FDA also promotes maximum utilization of Federal workspace. FDA's energy saving projects decrease long-term energy usage and operating and maintenance costs while increasing facility life span and efficiency to support Executive Order 13514 − Federal Leadership in Environmental, Energy, and Economic Performance.

As another example, FDA is replacing and centralizing existing geographically disparate facilities with new, state-of-the art laboratories, office buildings, and support facilities as part of the White Oak Campus consolidation.

GSA Rental Payments

The GSA Rental Payments account includes FDA rental payments to cover FDA's office and laboratory facilities. FDA occupies six million square feet of GSA owned or GSA leased office, laboratory, and warehouse space. More than two-thirds of the GSA rent charges for GSA owned or GSA leased space are for facilities in the Washington, D.C. area. FDA occupies GSA space in approximately 290 buildings, including district offices, regional offices, laboratories, resident posts, and border stations across the nation and in Puerto Rico.

The GSA Rental Payments account ensures that the FDA workforce has the space necessary to carry out FDA's public health mission.

During FY 2015, FDA:

- relocated from two headquarters office buildings to collocate in one leased location in Rockville, Maryland – released one of the two vacated office buildings to GSA
- completed decommissioning and released a CBER lab at headquarters
- vacated two ORA resident posts
- vacated the Kansas City Lab Annex
- relocated one OCI field office
- relocated five ORA resident posts.

In FY 2016, FDA plans to:

- release the second vacated office building from which staff were collocated in one leased location in Rockville, Maryland
- relocate two ORA resident posts
- lease new space for headquarters.

FDA strives to be cost effective and energy efficient when it acquires the necessary space to meet the mission in accordance with nationally recognized standards.

Other Rent and Rent-Related Activities

The Other Rent and Rent-Related Activities account includes commercial rent and rent-related charges that are not part of the GSA Rental account. These funds cover costs for operating and maintaining FDA and GSA facilities located nationwide. Costs include:

- commercial rent
- operation and maintenance contracts
- janitorial and grounds maintenance contracts
- above standard security and guard services contracts
- standard utilities in FDA owned facilities
- essential overtime utilities in laboratories and data centers
- other above-standard level services not provided by GSA in GSA-managed facilities.

This account ensures that FDA's offices and labs are functional and supports the FDA workforce in meeting its public health mission by providing safe, efficient, and secure facilities.

Additionally, FDA is implementing energy efficiencies that will result in significant savings in the Other Rent and Rent-Related Activities account. These projects support:

- Executive Order 13514, Federal Leadership in Environmental, Energy, and Economic Performance
- HHS' Efficient Energy Management Assessments
- the Energy Policy Act of 2005
- HHS Sustainable and High Performance Buildings Policy
- HHS Sustainable Buildings Plan
- the 2006 Federal Leadership in High Performance and Sustainable Buildings Memorandum of Understanding.

For the White Oak Campus, GSA entered into Energy Savings Performance Contracts (ESPCs) with Honeywell Corporation to build a Central Utility Plant (CUP), provide utilities, and perform operations and maintenance activities in a phased approach consistent with the construction and occupancy of the Campus. FDA entered into a memorandum of understanding with GSA and committed to a long-term occupancy of the Campus, including an agreement to pay a share of the costs associated with the ESPCs.

Under this agreement, FDA's share of these costs is less than FDA would have paid for utilities if the energy saving features provided by the ESPC were not implemented. When each ESPC phase begins to provide benefits to the Campus including utilities to FDA-occupied buildings, FDA is required to pay the agreed-upon share. The most recent example is GSA's "ESPC III," which covers the expansion of the CUP. The CUP expansion provides the utilities needed to occupy and operate the new Life Sciences-Biodefense Laboratory Complex (LSBC).

FDA awarded a third Utility Energy Service Contract (UESC) with Washington Gas at the Muirkirk Road Campus with a capital investment of $958,863 with utility cost savings of approximately $143,706 annually in water, sewer, electricity, and fuel costs at a simple pay back of 6.7 years. This project was substantially completed as of March 2015. FDA is currently in the procurement stage of a fourth UESC with Washington Gas at the Muirkirk Road Campus with a capital investment of $2,481,327 and utility cost savings of approximately $313,700 annually at a simple payback of 7.91 years.

The UESC for its owned site in Irvine, California, with Southern California Edison Electric Power Company, with a capital investment of $2,570,000 and cost savings of about $254,741 per year with a simple payback of 10.1 years is substantially complete, energy conservation measures are operational, and savings are underway.

GSA is performing audits in FDA occupied leased facilities, such as the Queens, New York lab. UESCs in GSA-leased buildings will, if implemented, provide energy savings.

Awarding additional UESCs and procuring renewable energy will contribute to HHS sustainability goals established in the HHS Strategic Sustainability Plan developed in accordance with Executive Order 13514, Federal Leadership in Environmental, Energy, and Economic Performance. FDA's activities related to UESCs and renewable energy will help reduce greenhouse gas emissions.

White Oak

Congress' intent for unifying the majority of FDA Headquarters on the White Oak Campus was to speed operational excellence and ensure a scientifically stronger FDA. Toward that goal, the White Oak Campus replaces and centralizes existing geographically disparate facilities with new, state-of-the art laboratories, office buildings and support facilities into one location. While the

GSA appropriation funds the design and construction of the new buildings at White Oak, FDA's budget authority and various user fees fund building infrastructure, fit-out, specialized equipment, move costs, and operations and logistics at the Campus.

White Oak funding supports campus operations and requirements including:

- relocation activities
- internal communications and information technology − infrastructure, equipment, cabling and audiovisual
- security − infrastructure and equipment
- surplus of furniture and equipment
- decommissioning of FDA vacated laboratories final commissioning and certification of the specialized laboratories
- critical support and maintenance of vital specialized laboratory equipment
- start up and operation of a critical Safety Program to support the new labs Complex
- security features to expand the CUP.

FDA initiated relocation activities to White Oak in FY 2002. The total number of employees currently assigned to the White Oak Campus is approximately 9,000 as a result of completing the occupancy of the Biodefense Laboratory Complex (two office and two lab buildings) in FY 2014.

In FY 2015, FDA initiated 25 projects in support of commissioning the White Oak laboratories, including the Biosafety Level 3 (BSL3) laboratories and vivarium facilities allowing their certification for use. FDA also initiated two studies for Building 25 and Building 45 in preparation of GSA funding to complete construction of these remaining buildings identified in the 2009 White Oak Master Plan.

In FY 2016, FDA will initiate a study for housing an additional 3,800 headquarters staff. This increase is due to new and expanded authorities and public health responsibilities beyond what was planned for in the 2009 Master Plan.

FUNDING HISTORY – GSA RENTAL PAYMENTS

Fiscal Year	Program Level	Budget Authority	User Fees
FY 2013 Actual	$190,151,000	$149,970,000	$40,181,000
FY 2014 Actual	$209,372,000	$162,076,000	$47,296,000
FY 2015 Actual	$219,966,000	$168,882,000	$51,084,000
FY 2016 Enacted	$239,105,000	$176,683,000	$62,422,000
FY 2017 President's Budget	$240,205,000	$170,208,000	$69,997,000

FUNDING HISTORY - OTHER RENT AND RENT-RELATED ACTIVITIES

Fiscal Year	Program Level	Budget Authority	User Fees
FY 2013 Actual	$88,129,000	$64,058,000	$24,071,000
FY 2014 Actual	$109,416,000	$74,674,000	$34,742,000
FY 2015 Actual	$115,424,000	$72,943,000	$42,481,000
FY 2016 Enacted	$119,560,000	$73,484,000	$46,076,000
FY 2017 President's Budget	$123,928,000	$71,943,000	$51,985,000

FUNDING HISTORY - WHITE OAK

Fiscal Year	Program Level	Budget Authority	User Fees
FY 2013 Actual	$57,159,000	$53,684,000	$3,475,000
FY 2014 Actual	$61,603,000	$58,044,000	$3,559,000
FY 2015 Actual	$46,687,000	$43,044,000	$3,643,000
FY 2016 Enacted	$52,346,000	$48,044,000	$4,302,000
FY 2017 President's Budget	$47,461,000	$43,044,000	$4,417,000

BUDGET REQUEST

The FY 2017 Budget Request is $411,594,000, of which $285,195,000 is budget authority and $126,399,000 is user fees. The budget authority decreases by $13,016,000 compared to the FY 2016 Enacted level and user fees increase by $13,599,000.

The Infrastructure Program ensures that FDA's offices and labs across the country – and a fully integrated headquarters campus – are optimally functioning to enable FDA to carry out its mission and respond to food safety and medical product emergencies. Further, it supports:

- FDA's mission of protecting the public health by providing secure and cost-effective office and laboratory space to perform mission-critical work
- the FDA Strategic Goal to Strengthen Organizational Excellence and the FDA Strategic Priority of Stewardship
- enhanced productivity and capabilities needed for the agency to achieve its expanding public health mission.

GSA Rental Payments

The FY 2017 Budget request for GSA Rental Payments is $240,205,000, of which $170,208,000 is budget authority and $69,997,000 is user fees. The budget authority decreases by $6,475,000 compared to the FY 2016 Enacted level and user fees increase by $7,575,000.

The rental properties that provide office and laboratory space for FDA employees are essential facilities. The FY 2017 Budget Request for GSA Rental Payments covers the cost of rental payments to GSA for FDA's six million square feet of GSA-rented office and laboratory space.

Other Rent and Rent-Related

The FY 2017 Budget request for Other Rent and Rent-Related is $123,928,000, of which $71,943,000 is budget authority and $51,985,000 is user fees. The budget authority decreases by $1,541,000 compared to the FY 2016 Enacted level and user fees increase by $5,909,000.

The FY 2017 Budget will allow FDA to operate, maintain, and secure its facilities in an appropriate and sustainable manner to support 16,000 staff members.

White Oak

The FY 2017 Budget request for White Oak consolidation and operations activities is $47,461,000, of which $43,044,000 is budget authority and $4,417,000 is user fees. The budget authority decreases by $5,000,000 compared to the FY 2016 Enacted level and user fees increase by $115,000.

The FY 2017 Budget provides the necessary resources for ongoing above GSA standard repairs and improvements, and mission support services for the almost 9,000 employees occupying the White Oak Campus. The FY 2017 Budget request will fund support services, transportation services, labor, and loading dock services, and a centralized safety program.

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BUILDINGS AND FACILITIES

(Dollars in Thousands)	FY 2015 Final	FY 2015 Actuals	FY 2016 Enacted	FY 2017 President's Budget	FY 2017 +/- FY 2016
Buildings and Facilities (Budget Authority).....	8,788	8,997	8,788	11,788	3,000

Authorizing Legislation: Federal Food, Drug, and Cosmetic Act (21 U.S.C. 321-399); Public Health Service Act (42 U.S.C. §238); Federal Property and Administrative Services Act of 1949, as amended (40 U.S.C. §§471 *et seq.*); National Historic Preservation Act of 1966 (P.L. 89-665; 16 U.S.C. 470 *et seq.*); Chief Financial Officers Act of 1990 (P.L. 101-576); Federal Financial Management Act of 1994 (P.L. 103-356); Energy Policy Act of 2005 (P.L. 109-058); Energy Independence & Security Act of 2007 (P.L. 10-140, 121 Stat. 1492)

Allocation Methods: Direct Federal/Contract

PROGRAM DESCRIPTION AND ACCOMPLISHMENTS

As with the Infrastructure Program, the Buildings and Facilities (B&F) Program ensures that FDA's offices and labs across the country are optimally functioning to enable FDA to carry out its mission and respond to food safety and medical product emergencies. Investing in FDA's facility priorities provides the infrastructure and scientific capabilities necessary to ensure FDA can achieve the regulatory responsibilities, strategic priorities, and program initiatives outlined in this document.

Strengthen Organizational Excellence

The B&F Program is a critical element of FDA's real property asset management program and directly supports FDA's public health mission. FDA recruits, develops, retains and strategically manages a world-class workforce, improves the overall operation and effectiveness of FDA, and invests in infrastructure to enhance productivity and capabilities.

Under the goal of Organizational Excellence, FDA has demonstrated stewardship by striving to provide high quality, reliable buildings that support FDA's mission critical work. B&F funding is used to:

- construct new mission-critical laboratory, office, and support space
- renovate, repair site infrastructure and buildings – an inventory of 85 existing FDA-owned facilities at six sites in the United States and Puerto Rico.

HHS developed a Real Property Asset Management Plan (AMP) to outline a framework and holistic approach for acquiring, managing, and disposing of real property assets.

The AMP contains performance measures and benchmarks that monitor key real property asset management criteria, including:

- mission criticality
- utilization
- facility condition
- operating costs.

The physical condition of FDA assets is critical. A safe, suitable, and reliable work environment is essential for FDA to protect the nation's health, security, and economy. Improving and

maintaining facilities often results in a positive effect on associated utilization and operating costs.

An important component of FDA real property asset management is conducting facility condition assessments on a 5-year cycle to evaluate:

- site infrastructure – utility distribution systems, roads, and sidewalks
- buildings, including physical systems – architectural, civil, mechanical, electrical
- code compliance
- life and other safety conditions
- finishes and aesthetics.

The assessments result in:

- a list of maintenance and repair deficiencies with associated costs known as the Backlog of Maintenance and Repair (BMAR)
- a plant replacement value – the cost to replace an infrastructure item or a facility
- a Facility Condition Index (FCI) score.

The BMAR identifies and estimates costs associated with addressing needed maintenance, repairs, and replacement of equipment and building systems that are approaching – or past – their useful life. The BMAR also identifies and prioritizes short- and long-term projects using B&F funding.

At of the end of FY 2015, the BMAR for the six FDA-owned sites, including renewals, was approximately $139.6 million. Approximately 69 percent of FDA-owned assets have an FCI score below the HHS-established goal of 90 and require significant repairs and improvements.

FDA uses funds to accomplish both mission and BMAR-driven projects. The goal is to improve the condition of these assets and the site infrastructure and to ensure the suitability and reliability of FDA-owned assets.

FDA has 22 labs located at the following six owned sites:

- Gulf Coast Seafood Laboratory, Dauphin Island, AL
- Jefferson Labs Complex (JLC), Jefferson, AR
- Muirkirk Road Complex, Laurel, MD
- Pacific Regional Laboratory SW, Irvine, CA
- San Juan District Office and Laboratory, San Juan, PR
- Winchester Engineering & Analytical Center (WEAC), Winchester, MA.

Activities in FY 2015 and Planned for FY 2016

Gulf Coast Seafood Laboratory – Dauphin Island, Alabama

The Gulf Coast Seafood Laboratory is FDA's sole marine laboratory and represents 80 percent of FDA research capacity for addressing seafood safety.

In FY 2015, FDA initiated projects to replace entrance doors and frames and to replace the handrails and concrete stairs at multiple buildings to meet accessibility codes.

In FY 2016, FDA will design and construct a new Algal Culture System Room to support the local mission and perform an energy audit.

Jefferson Laboratories Complex (JLC) – Jefferson, Arkansas
The Jefferson Laboratories Complex houses the National Center for Toxicological Research (NCTR) and the Office of Regulatory Affairs (ORA) Arkansas Regional Laboratory (ARL). Additional details of the vital scientific research that takes place at the Complex can be found in the NCTR Narrative.

ARL provides analytical laboratory support to FDA's regulatory mission in the Southwest Region. In FY 2015, FDA awarded a project to finish the replacement of the site's main electrical switchgear that is part of a much larger, ongoing project to improve the aged electrical infrastructure at the JLC site. This ongoing project began with a significant, unexpected, campus-wide power outage in the winter of 2010 that led to a need to take immediate action to replace the 60-year-old electrical infrastructure, including the installation of needed emergency power.

In FY 2015, FDA initiated additional site infrastructure projects including:

- completing the replacement of the third of three inefficient and maintenance-intensive boilers and an associated emergency generator
- designing a project to replace a chiller connected to the Campus chilled water loops
- repairing the domestic water system, including designing and installing a new water well and upgrading water treatment controls
- designing and constructing a project to renovate a processing facility that supports animal research on the entire Campus
- replacing HVAC preheat coils.

Building improvement projects were also initiated that include:

- renovating two animal research areas
- developing bridging documents for a project to renovate two critical laboratory and animal research buildings
- replacing large air handlers that serve a critical laboratory, office and vivarium
- completing the third and fourth phases of replacing the HVAC controls in a critical laboratory building
- repairing a freight elevator.

In FY 2016, FDA will:

- design projects to install a new chilled water plant and replace chillers in a critical animal research building
- design a project to replace two backup emergency generators
- design a project to renovate the pathology and archive storage areas
- design a project to renovate the existing data center
- complete the fifth phase of replacing the HVAC controls in a critical laboratory building
- renovate a second processing facility to modernize equipment and the HVAC system that will support animal research on the campus
- design a project to construct a large auditorium in an existing building to support scientific collaboration
- repair campus roads.

Muirkirk Road Complex (MRC) – Laurel, Maryland
The Muirkirk Road Complex is a campus shared by the Foods and Animal Drugs and Feeds programs to conduct research on:

- food and animal drug safety
- toxicology
- microbiology
- molecular biology.

In FY 2015, FDA initiated projects to:

- create additional workstations for laboratory support personnel
- conduct an investment grade audit to identify additional energy conservation measures for the campus
- renovate restrooms to address leaks and reduce water consumption and associated costs
- replace flooring in a critical animal research area
- renovate 10 walk-in freezer boxes
- modify the current utilization of emergency power to use available capacity for mission critical laboratories.

In FY 2016, FDA will:

- install a fire resistant shaft enclosure in a laboratory building to ensure adequate fire safety
- replace a reverse osmosis tank servicing research laboratories
- install a backup generator for a laboratory building
- paint ceilings and walls, and replace flooring in a critical animal research area to ensure animal research accreditation
- replace tile walkway to main entrance that is aged and cracking to eliminate the trip and fall hazard
- create additional workstations for laboratory support personnel
- replace a clean steam generator
- expand conference room and add divider to ensure space supports increased scientific meetings
- pave the road to a large emergency generator for more efficient access.

Pacific Regional Laboratory Southwest – Irvine, California
The Pacific Regional Laboratory Southwest provides analytical laboratory support to FDA's regulatory mission in the Pacific Region.

In FY 2015, FDA initiated projects to design an independent air handling unit and anteroom to service the BSL-3 lab and to renovate offices.

In FY 2016, FDA will design chemical fume hood exhaust modifications for the lab and install additional ventilation in telephone and LAN closets.

San Juan District Office and the National Drug Servicing Laboratory – San Juan, PR
The National Dug Servicing Laboratory specializes in pharmaceutical analysis.

In FY 2015, FDA initiated projects to complete the replacement of interior doors and frames of as well as to modify the access ramp to the main laboratory building.

In FY 2016, FDA will:

- replace the floor finishes in the main administration building
- perform a structural evaluation of the Maintenance Building and make necessary repairs, if possible.

In FY 2016 FDA will also improve the main laboratory by:

- designing, replacing and upgrading the electrical distribution wiring system
- balancing the ventilation system to ensure proper pressurization for safety
- replacing the vacuum system
- installing a distilled water recirculation system.

Winchester Engineering and Analytical Center (WEAC) –Winchester, Massachusetts
The Winchester Engineering and Analytical Center is a specialty laboratory used to:

- test the safety and performance of medical devices, microwaves, and radiopharmaceuticals
- conduct radionuclide testing with food samples
- ensure seafood freshness.

In FY 2015 FDA initiated a project to replace an exhaust fan in a laboratory support room. In FY 2016 FDA will:

- provide humidity control in one lab
- install safety railings on the roof of one building
- make needed improvements to the parking lot.

FUNDING HISTORY

Fiscal Year	Program Level	Budget Authority	User Fees
FY 2013 Actual	$5,635,000	$5,635,000	$0
FY 2014 Actual	$7,808,000	$7,808,000	$0
FY 2015 Actual	$8,997,000	$8,997,000	$0
FY 2016 Enacted	$8,788,000	$8,788,000	$0
FY 2017 President's Budget	$11,788,000	$11,788,000	$0

BUDGET REQUEST

The FY 2017 Budget Request is $11,788,000, consisting solely of budget authority. This amount is an increase of $3,000,000 compared to the FY 2016 Enacted level.

Building & Facilities Program: +$3.0 million

This budget request provides funds to address the most urgent repairs and improvements to sustain the current condition of FDA's owned facilities – especially labs that enable critical analytical and regulatory functions – and site infrastructure. These resources provide the start of a multi-year need to not only sustain the current condition of FDA's owned locations, but to also reduce the current FDA BMAR of $139.6 million, improve the condition of many critical

facilities, address infrastructure and building system renewals, and initiate mission support projects needed by FDA product centers to meet expanding responsibilities and respond to changing science.

FDA's responsibilities continue to escalate as we work to fulfill the mandates of groundbreaking legislation passed in recent years. This expansion of authorities urgently requires that FDA's critical infrastructure at its owned locations is optimally functioning to enable FDA to carry out its mission and respond to food safety and medical product emergencies. This investment will prevent the further deterioration of FDA's owned facilities.

FDA will use the requested resources to fund various projects at the six mission-critical FDA owned sites.

At the Gulf Coast Seafood Laboratory facility, FDA will:

- design and build a new seawall to protect the property and ensure reliability, especially in severe weather
- complete several energy conservation measures to save energy and associated costs, including installation of a geothermal HVAC system, retro-commissioning HVAC controls, converting lighting to LED, and installing photo voltaic cells for power.
- complete a study to improve electrical efficiency in the main laboratory building to protect critical scientific and IT equipment.

At the Jefferson Labs Complex, FDA will:

- complete an additional phase of replacing HVAC controls in a critical laboratory building
- design renovations for a laboratory and an animal research building
- repair the domestic water system in a laboratory building
- renovate a critical animal research area and replace the building HVAC system
- complete the first phase of a project to replace chillers in a critical site chiller plant
- design the consolidation of diet preparation areas for animal research
- install new compressors in the water treatment plant.

At the Muirkirk Road Complex, FDA will replace air handling units that serve the vivarium that are past their useful life.

In the Pacific Regional Laboratory Southwest, FDA will install an independent air handling unit and construct an anteroom for the Biosafety Level 3 laboratory to ensure safe and reliable operations.

In the San Juan District Office and Laboratory, FDA will:

- upgrade and replace the electrical distribution system for the main laboratory building
- modify five building entrances and repair sidewalks and access ramps to meet ADA requirements.

At the Winchester Engineering & Analytical Center, FDA will replace a laboratory ventilation unit past its useful life.

The following table provides an allocation plan by site for use of the FY 2017 funds.

FY 2017 BUILDINGS AND FACILITIES ALLOCATION PLAN

Site	Total
CFSAN Gulf Coast Seafood Laboratory	$ 1,828,000
Jefferson Laboratories Complex (NCTR & ARL) – Jefferson, AR	7,544,000
Muirkirk Road Complex (MOD1, MOD2, BRF) – Laurel, MD	916,000
ORA Pacific Regional Laboratory SW – Irvine, CA	600,000
San Juan District Office and Laboratory – San Juan, PR	700,000
Winchester Engineering and Analytical Center – Winchester, MA	200,000
B&F Project Total	**$11,788,000**

In FY 2017, sustaining the condition of FDA-owned real property assets and site infrastructure will continue to be a priority. Completion of these projects enhances FDA's ability to achieve its critical mission. In addition, several of these projects will contribute to HHS sustainability goals established in the HHS Strategic Sustainability Performance Plan.

More specifically, projects planned in FY 2017 will help reduce Scope 1, 2, and 3 greenhouse gas emissions[108] by:

- replacing aged, inefficient HVAC controls and equipment
- installation of a geothermal HVAC system
- retro-commissioning HVAC controls
- converting lighting to LED
- installing photo voltaic cells for power
- replacing aged, inefficient and unreliable electrical distribution systems.

[108] More information can be found in the HHS Strategic Sustainability Performance Plan at: http://www.hhs.gov/sites/default/files/about/sustainability/2014-sustainability-plan.pdf.

PROGRAM ACTIVITY DATA[1]

Facility	Average Facility Condition Index (FCI) Score		
	FY 2015 Enacted	FY 2016 Request	FY 2017 Request
CFSAN Gulf Coast Seafood Laboratory[2]	92	92	92
Jefferson Laboratories Complex[3]	68	69	71
Muirkirk Road Complex[4]	82	85	85
ORA Pacific Regional Laboratory Southwest[5]	97	97	100
San Juan District Office and Laboratory[6]	76	78	78
Winchester Engineering And Analytic Center[7]	66	66	66

[1] The Backlog of Maintenance and Repairs (BMAR) at each site is significant. Approximately 69 percent of FDA-owned assets have an FCI score below the HHS-established goal of 90 and require significant repairs and improvements. Funding is allocated to projects at each site in an effort to reduce the BMAR and improve the average Facility Condition Index (FCI) for the site. Without ongoing repair and improvement projects, the increase in BMAR each year would result in no change or a decrease in the FCI rather than an increase. Improvements may not be realized in the fiscal year the funds are received due to timing and complexity of the project.
[2] Based on funding levels in FY 2016 and FY 2017, the BMAR for this site will not decrease. Remaining BMAR for this site is approximately $350K
[3] Based on funding levels in FY 2016 and FY 2017 the BMAR for this site will decrease by approximately $8.66M. Remaining BMAR total will be approximately $104.3M
[4] Based on funding levels in FY 2016 and FY 2017 the BMAR for this site will decrease by approximately $2.78 M. Remaining BMAR total will be approximately $14.2M.
[5] Based on funding levels in FY 2016 and FY 2017, the BMAR for this site will decrease by $976K. Remaining BMAR for this site is approximately $48K.
[6] Based on funding levels in FY 2016 and FY 2017 the BMAR for this site will decrease by approximately $338K. Remaining BMAR total will be approximately $3.1M.
[7] Based on funding levels in FY 2016 and FY 2017, the BMAR for this site will decrease by approximately $6K. Remaining BMAR total will be approximately $4.9 M

OBJECT CLASSIFICATION TABLES

BUDGET AUTHORITY

(Dollars in Thousands)	FY 2015 Actuals	FY 2016 Enacted	FY 2017 President's Budget
Personnel Compensation and Benefits:			
Personnel Compensation:			
Full-time permanent (11.1)	861,326	895,214	909,478
Other than full-time permanent (11.3)	88,919	92,417	93,890
Other personnel compensation (11.5)	37,473	38,947	39,567
Military personnel (11.7)	62,596	63,363	64,186
Special personnel services payments (11.8)	1,071	1,113	1,130
Subtotal, Personnel Compensation	**1,051,384**	**1,091,054**	**1,108,251**
Benefits:			
Civilian benefits (12.1)	316,806	329,271	334,517
Military benefits (12.2)	31,334	31,718	32,131
Benefits to former personnel (13.0)	6	6	6
Subtotal, Benefits	**348,147**	**360,995**	**366,654**
Total Personnel Compensation and Benefits	**1,399,532**	**1,452,049**	**1,474,905**
Contractual Services and Supplies			
Contractual Services:			
Travel and transportation of persons (21.0)	47,184	49,912	49,832
Transportation of things (22.0)	3,671	3,883	3,877
Rental payments to GSA (23.1)	168,882	176,683	170,208
Rent payments to others (23.2)	5,399	5,711	5,702
Communication, utilities, and misc. charges (23.3)	30,868	32,652	32,600
Printing and reproduction (24.0)	1,580	1,671	1,668
Subtotal, Contractual Services	**257,584**	**270,512**	**263,887**
Other Contractual Services:			
Consulting services (25.1)	66,215	70,042	69,930
Other services (25.2)	344,611	364,533	363,948
Purchase of goods and svcs from Govt Acts. (25.3)	124,123	131,300	131,088
Operation and maintenance of facilities (25.4)	81,150	85,841	85,703
Research and Development Contracts (25.5)	15,349	16,237	16,211
Operation and maintenance of equipment (25.7)	76,504	80,926	80,796
Subtotal, Other Contractual Services	**707,952**	**748,879**	**747,676**
Supplies and Materials:			
Supplies and materials (26.0)	45,146	47,756	47,679
Equipment (31.0)	70,741	74,831	74,711
Land and Structures (32.0)	732	774	773
Grants, subsidies, and contributions (41.0)	124,825	132,041	131,829
Insurance claims and indemnities (42.0)	1,182	1,250	1,248
Interest and dividends (43.0)	4	4	4
Subtotal, Supplies and Materials	**242,630**	**256,656**	**256,244**
Total Contractual Services and Supplies	**1,208,165**	**1,276,047**	**1,267,807**
Total Budget Authority by Object Class	**2,607,697**	**2,728,096**	**2,742,712**

USER FEE

(Dollars in Thousands)	FY 2015 Actuals	FY 2016 Enacted	FY 2017 President's Budget
Personnel Compensation and Benefits:			
Personnel Compensation:			
Full-time permanent (11.1)	482,301	534,005	575,668
Other than full-time permanent (11.3)	66,088	73,172	78,881
Other personnel compensation (11.5)	49,919	55,270	59,582
Military personnel (11.7)	36,851	37,303	37,788
Special personnel services payments (11.8)	170	188	203
Subtotal, Personnel Compensation	**635,328**	**699,938**	**752,122**
Benefits:			
Civilian benefits (12.1)	177,414	196,434	211,760
Military benefits (12.2)	19,626	19,866	20,125
Benefits to former personnel (13.0)	404	404	404
Subtotal, Benefits	**197,445**	**216,704**	**232,289**
Total Personnel Compensation and Benefits	**832,772**	**916,642**	**984,411**
Contractual Services and Supplies			
Contractual Services:			
Travel and transportation of persons (21.0)	14,281	14,551	17,262
Transportation of things (22.0)	214	218	258
Rental payments to GSA (23.1)	51,242	62,422	69,997
Rent payments to others (23.2)	179	182	216
Communication, utilities, and misc. charges (23.3)	3,336	3,399	4,032
Printing and reproduction (24.0)	3,123	3,182	3,775
Subtotal, Contractual Services	**72,375**	**83,954**	**95,540**
Other Contractual Services:			
Consulting services (25.1)	66,237	67,489	80,061
Other services (25.2)	417,362	425,259	504,472
Purchase of goods and svcs from Govt Acts. (25.3)	234,618	239,056	283,585
Operation and maintenance of facilities (25.4)	27,539	28,060	33,287
Research and Development Contracts (25.5)	16,086	16,390	19,444
Operation and maintenance of equipment (25.7)	39,313	40,057	47,518
Subtotal, Other Contractual Services	**801,155**	**816,311**	**968,367**
Supplies and Materials:			
Supplies and materials (26.0)	15,198	15,486	18,370
Equipment (31.0)	23,911	24,363	28,901
Land and Structures (32.0)	---	---	---
Grants, subsidies, and contributions (41.0)	157,451	160,429	190,312
Insurance claims and indemnities (42.0)	6	6	7
Interest and dividends (43.0)	---	---	---
Subtotal, Supplies and Materials	**196,566**	**200,284**	**237,590**
Total Contractual Services and Supplies	**1,070,096**	**1,100,549**	**1,301,497**
Total Reimbursable by Object Class	**1,902,868**	**2,017,191**	**2,285,908**

TOTAL PROGRAM

(Dollars in Thousands)	FY 2015 Actuals	FY 2016 Enacted	FY 2017 President's Budget
Personnel Compensation and Benefits:			
Personnel Compensation:			
Full-time permanent (11.1)	1,343,627	1,429,219	1,485,146
Other than full-time permanent (11.3)	155,007	165,589	172,771
Other personnel compensation (11.5)	87,391	94,217	99,149
Military personnel (11.7)	99,447	100,666	101,974
Special personnel services payments (11.8)	1,240	1,301	1,333
Subtotal, Personnel Compensation	**1,686,712**	**1,790,992**	**1,860,373**
Benefits:			
Civilian benefits (12.1)	494,221	525,705	546,277
Military benefits (12.2)	50,960	51,584	52,256
Benefits to former personnel (13.0)	411	411	411
Subtotal, Benefits	**545,592**	**577,700**	**598,944**
Total Personnel Compensation and Benefits	**2,232,304**	**2,368,692**	**2,459,317**
Contractual Services and Supplies			
Contractual Services:			
Travel and transportation of persons (21.0)	61,466	64,463	67,094
Transportation of things (22.0)	3,885	4,101	4,135
Rental payments to GSA (23.1)	220,124	239,105	240,205
Rent payments to others (23.2)	5,578	5,893	5,918
Communication, utilities, and misc. charges (23.3)	34,204	36,051	36,632
Printing and reproduction (24.0)	4,703	4,853	5,443
Subtotal, Contractual Services	**329,959**	**354,466**	**359,427**
Other Contractual Services:			
Consulting services (25.1)	132,451	137,531	149,991
Other services (25.2)	761,973	789,792	868,420
Purchase of goods and svcs from Govt Acts. (25.3)	358,741	370,356	414,673
Operation and maintenance of facilities (25.4)	108,689	113,901	118,990
Research and Development Contracts (25.5)	31,435	32,627	35,655
Operation and maintenance of equipment (25.7)	115,817	120,983	128,314
Subtotal, Other Contractual Services	**1,509,107**	**1,565,189**	**1,716,043**
Supplies and Materials:			
Supplies and materials (26.0)	60,344	63,242	66,049
Equipment (31.0)	94,652	99,194	103,612
Land and Structures (32.0)	732	774	773
Grants, subsidies, and contributions (41.0)	282,275	292,470	322,141
Insurance claims and indemnities (42.0)	1,188	1,256	1,255
Interest and dividends (43.0)	4	4	4
Subtotal, Supplies and Materials	**439,196**	**456,940**	**493,834**
Total Contractual Services and Supplies	**2,278,261**	**2,376,595**	**2,569,304**
Total Program Level by Object Class	**4,510,565**	**4,745,287**	**5,028,620**

SALARY AND EXPENSES

(Dollars in Thousands)	FY 2015 Actuals	FY 2016 Enacted	FY 2017 President's Budget
Personnel Compensation and Benefits:			
Personnel Compensation:			
Full-time permanent (11.1)	861,326	895,214	909,478
Other than full-time permanent (11.3)	88,919	92,417	93,890
Other personnel compensation (11.5)	37,473	38,947	39,567
Military personnel (11.7)	62,596	63,363	64,186
Special personnel services payments (11.8)	1,071	1,113	1,130
Subtotal, Personnel Compensation	**1,051,384**	**1,091,054**	**1,108,251**
Benefits:			
Civilian benefits (12.1)	316,806	329,271	334,517
Military benefits (12.2)	31,334	31,718	32,131
Benefits to former personnel (13.0)	6	6	6
Subtotal, Benefits	**348,147**	**360,995**	**366,654**
Total Personnel Compensation and Benefits	**1,399,532**	**1,452,049**	**1,474,905**
Contractual Services and Supplies			
Contractual Services:			
Travel and transportation of persons (21.0)	47,184	49,912	49,832
Transportation of things (22.0)	3,671	3,883	3,877
Rent payments to others (23.2)	5,399	5,711	5,702
Communication, utilities, and misc. charges (23.3)	30,868	32,652	32,600
Printing and reproduction (24.0)	1,580	1,671	1,668
Subtotal, Contractual Services	**88,702**	**93,829**	**93,679**
Other Contractual Services:			
Consulting services (25.1)	66,215	70,042	69,930
Other services (25.2)	344,611	364,533	363,948
Purchase of goods and svcs from Govt Acts. (25.3)	124,123	131,300	131,088
Operation and maintenance of facilities (25.4)	81,150	85,841	85,703
Research and Development Contracts (25.5)	15,349	16,237	16,211
Operation and maintenance of equipment (25.7)	76,504	80,926	80,796
Subtotal, Other Contractual Services	**707,952**	**748,879**	**747,676**
Supplies and materials (26.0)	45,146	47,756	47,679
Total Non-Pay Costs	**841,800**	**890,464**	**889,034**
Rental payments to GSA (23.1)	168,882	176,683	170,208
Grant Total, Salaries & Expenses and Rent	**2,410,213**	**2,519,196**	**2,534,147**
Direct FTE	**10,111**	**10,363**	**10,391**

DETAIL OF FULL-TIME EQUIVALENTS

	FY 2015 Actual			FY 2016 Estimate			FY 2017 Estimate		
	Civilian	Military	Total	Civilian	Military	Total	Civilian	Military	Total
Center for Food Safety and Applied Nutrition	926	35	961	1,036	35	1,071	1,119	35	1,154
Center for Drug Evaluation and Research	3,880	449	4,329	4,088	449	4,537	4,094	449	4,543
Center for Biologics Evaluation and Research	1,005	67	1,072	1,042	67	1,109	1,045	67	1,112
Center for Veterinary Medicine	556	10	566	561	10	571	582	10	592
Center for Devices and Radiological Health	1,582	93	1,675	1,509	93	1,602	1,542	93	1,635
National Center for Toxicological Research	276	---	276	276	---	276	276	---	276
Office of Regulatory Affairs	4,446	330	4,776	4,675	330	5,005	4,807	330	5,137
Headquarters and Office of the Commissioner	1,050	54	1,104	1,113	54	1,167	1,146	54	1,200
Export Certification	18	---	18	18	---	18	18	---	18
Color Certification	36	---	36	37	---	37	37	---	37
Family Smoking Prevention and Tobacco Control Act	640	31	671	781	31	812	849	31	880
Total Mandatory Resources - Directed Transfer	---	---	---	---	---	---	51	---	51
Total	**14,415**	**1,069**	**15,484**	**15,136**	**1,069**	**16,205**	**15,566**	**1,069**	**16,635**

Five Year History of GS/GM Average Grade

Year	Grade
FY 2013	13
FY 2014	13
FY 2015	13
FY 2016	13
FY 2017	13

* Totals do not include an estimated 85 reimbursable, 1 CRADA, 2 FOIA, and 28 PEPFAR FTE.

** FY 2015 FTE totals do not include 20 FTE related to the $25M received in one-time emergency funding for the Ebola epidemic.

DETAIL OF POSITIONS

	FY 2015 Actual	FY 2016 Base	FY 2017 President's Budget
Executive Level			
Executive Level I	---	---	---
Executive Level II	---	---	---
Executive Level III	---	---	---
Executive Level IV	---	1	1
Executive Level V	---	---	---
Total Executive Level	---	**1**	**1**
Executive Service (ES)			
Executive Service	65	68	70
Total Executive Service	**65**	**68**	**70**
General Schedule (GS)			
GS-15	1,569	1,648	1,689
GS-14	3,152	3,309	3,392
GS-13	4,292	4,506	4,619
GS-12	2,125	2,231	2,287
GS-11	730	767	786
GS-10	16	17	17
GS-9	559	587	602
GS-8	112	118	121
GS-7	410	430	441
GS-6	61	64	66
GS-5	122	128	131
GS-4	72	75	77
GS-3	33	35	36
GS-2	9	9	9
GS-1	1	1	1
Total General Schedule	**13,263**	**13,925**	**14,274**
Administrative Law Judges (AL)	1	2	2
Scientific/Senior Level (ST/SL)	3	3	3
Senior Biomedical Research Service (RS)	44	46	47
Scientific Staff Fellows (RG) (Title 42)	861	904	927
Distinguished Consultants/Senior Science Managers (RF) (Title 42)	140	147	151
Commissioned Corps (CC):			
Commissioned Corps - 08/07/06	235	235	235
Commissioned Corps - Other	834	834	834
Total Commissioned Corps	**1,069**	**1,069**	**1,069**
Administratively Determined (AD) (includes Title 42)[2]	1	1	1
Wage Grade	19	20	20
Consultants[2]	18	19	19
Total Mandatory Resources - Directed Transfer	---	---	51
Total FTE (End of Year)[1]	**15,484**	**16,205**	**16,635**
Average ES Level	3	3	3
Average ES Salary	$174,405	$176,149	$178,439
Average GS grade	13	13	13
Average GS Salary	$106,025	$107,085	$108,477

[1] Does not include an estimated 85 reimbursable, 1 CRADA, 2 FOIA, and 28 PEPFAR FTE. Also excludes 20 FTE for the emergency Ebola fund.

[2] Includes consultants appointed under 5 U.S.C. 3109, those appointed under similar authorities, and those appointed to serve as advisory committee members. However, scientists hired under Title 42 are now included in the Distinguished Consultants/Senior Science Managers (RF) category.

PHYSICIANS' COMPARABILITY ALLOWANCE (PCA) WORKSHEET

Food and Drug Administration

		FY 2015 (Actuals)	FY 2016 (Estimates)	FY 2017* (Estimates)
1) Number of Physicians Receiving PCAs		1	1	0
2) Number of Physicians with One-Year PCA Agreements		0	0	0
3) Number of Physicians with Multi-Year PCA Agreements		1	1	0
4) Average Annual PCA Physician Pay (without PCA payment)		$145,827	$153,702	0
5) Average Annual PCA Payment		$27,000	$26,000	0
6) Number of Physicians Receiving PCAs by Category (non-add)	Category I Clinical Position	0	0	0
	Category II Research Position	1	1	0
	Category III Occupational Health	0	0	0
	Category IV-A Disability Evaluation	0	0	0
	Category IV-B Health and Medical Admin.	0	0	0

*FY 2017 data will be approved during the FY 2018 Budget cycle.

7) If applicable, list and explain the necessity of any additional physician categories designated by your agency (for categories other than I through IV-B). Provide the number of PCA agreements per additional category for the PY, CY and BY.

FDA does not have a need for the additional physician categories other than Category II identified in number 6.

8) Provide the maximum annual PCA amount paid to each category of physician in your agency and explain the reasoning for these amounts by category.

FDA utilizes the Category II to hire physicians that are not eligible for Title 38 PDP. The maximum annual PCA for FY 2015 was $27,000 for the employee receiving PCA. The amount was determined based upon the qualifications of the physician. For FY 2016 the employee's PCA was reduced to $26,000 based upon the agreement. Effective September 30, 2016, the employee's PCA will be terminated.

9) Explain the recruitment and retention problem(s) for each category of physician in your agency (this should demonstrate that a current need continues to persist).

FDA made a decision in 2008 to convert all eligible physicians to Title 38 PDP which is useful in allowing the agency to effectively recruit and retain medical officers across the FDA. The minimal continued use of PCA allowed FDA the ability to recruit physicians who are not eligible for Title 38 PDP. Effective October 1, 2016 (FY 2017), the FDA will no longer use of PCA as a recruitment and retention incentive.

10) Explain the degree to which recruitment and retention problems were alleviated in your agency through the use of PCAs in the prior fiscal year.

FDA did not experience recruitment or retention problems of physicians and dentists in FY 2015. FDA used PCA as a means to recruit candidates that are not eligible for Title 38 PDP prior to FY 2016.

11) Provide any additional information that may be useful in planning PCA staffing levels and amounts in your agency.

FDA used PCA as an additional authority to hire and compensate physicians that are not eligible for Title 38 PDP.

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HOUSE APPROPRIATIONS COMMITTEES SIGNIFICANT ITEMS

HOUSE COMMITTEE REPORT (114-205)

1. Active Pharmaceutical Ingredients

The Committee is concerned that the FDA has not yet approved a list of Active Pharmaceutical Ingredients (APIs) for use by compounding pharmacists pursuant to the Drug Quality and Security Act (Public Law 112-43, 127 Stat. 587) and the Federal Food, Drug, and Cosmetic Act (21 U.S.C. 353a et seq.). Within 90 days of enactment of this Act, the FDA shall report to Congress on when its review of proposed APIs pursuant to § 503A(1)(a)(iii) will be completed.

FDA Response:
FDA will provide the requested report.

2. Antibiotics

The Committee urges the FDA to work to foster the development of new antibiotics by supporting greater collaboration between industry and the FDA around adaptive clinical trials and labeling changes. The President's Council of Advisors on Science and Technology has recommended this proposal to help support the type of robust drug development that will be needed to ensure patients are protected from bacterial resistance.

FDA Response:
FDA considers mitigation and prevention of antibiotic resistance a top priority. FDA will continue to collaborate with experts from academia, the pharmaceutical industry, professional societies, patient advocacy groups, and other Public Health Service agencies to find solutions to scientific challenges in the development of new antibacterial drugs. A draft Guidance for Industry document on possible streamlined drug development pathways for drugs with the capacity to be used for the treatment of serious bacterial diseases in patients who have an unmet medical need has been published that includes recommendations for clinical trial designs and labeling. Cooperation between FDA and industry, along with our partners in other Public Health Service agencies, could facilitate advancements in the field, providing a robust clinical and pre-clinical network to develop and improve new antibacterial therapies. These initiatives may advance the quality and efficiency of clinical trials, while facilitating innovation in drug development.

3. Bioethics

The Committee notes that the FDA commissioned a consensus study from the Institute of Medicine (IOM) on "Ethical and Social Policy Considerations of Novel Techniques for Prevention of Maternal Transmission of Mitochondrial DNA Diseases." The Committee further notes that the FDA has requested that the IOM produce a consensus report on the ethical and social policy issues related to genetic modification of eggs and zygotes to prevent transmission of mitochondrial disease. The Committee directs the FDA to establish an independent panel of experts, including those from faith-based institutions with expertise on bioethics and faith-based medical associations, and to submit this consensus report to the independent panel of experts upon its completion by the IOM. The Committee urges the independent panel of experts to review the IOM report and report their evaluation of its conclusions, along with any

recommendations based on this review, to the Committee within 30 days of the completion of the report by the IOM.

FDA Response:
FDA has commissioned the Institute of Medicine (IOM) to conduct a consensus study to develop a report that will inform FDA in consideration of review of applications in the area of genetic modification of eggs and zygotes for the prevention of mitochondrial disease. The development of novel techniques in this area raises complex ethical and social policy issues, thus, FDA has tasked the IOM to address a broad range of issues including the foundational question of whether safeguards such as specific measures and public oversight could adequately address the social and ethical concerns, or whether those concerns preclude clinical trials.

Specifically, the IOM committee developing the report includes members with expertise in religious studies, bioethics, health policy, legal matters, mitochondrial science, reproductive medicine, and medical history, as well as a patient representative. Therefore, FDA believes the IOM consensus study adequately takes into consideration the position of faith-based institutions. The IOM consensus study will also address a broad range of ethical and social policy issues. Additionally, to develop the report, the IOM committee has held several meetings and workshops, and will convene several more times. The workshop held in late March 2015 included presentations from and discussions with experts from faith-based institutions with expertise on bioethics, including faith-based medical associations.

4. Biological Products

The Committee commends the FDA for issuing draft guidance to address the mixing, diluting, or repackaging of biological products outside the scope of an approved biologics license application. The Committee urges the FDA to finalize the guidance without delay following the public comment period and continues to emphasize the need for close FDA inspection and supervision of large-scale compounding and repackaging of sterile injectable drugs and biological products, particularly products that are administered into areas of the human body where there is tempered immunity, such as the eye or spinal column, to ensure that they are processed in keeping with current good manufacturing practice for sterile products, in particular 21 CFR 200.50 regarding ophthalmic preparations.

FDA Response:
FDA shares the Committee's concern about the public health risks associated with improper manipulation of sterile injectable drug products, including biological products. Please be aware that the comment period on the draft guidances, concerning repackaging of certain human drug products and concerning mixing, diluting, and repackaging biological products by state-licensed pharmacies, Federal facilities, and outsourcing facilities closed on May 20, 2015. FDA received over 300 comments on the draft guidance concerning mixing, diluting, and repackaging biological products by state-licensed pharmacies, Federal facilities, and outsourcing facilities, and over 600 comments on the draft guidance concerning repackaging of human drug products. FDA intends to review the comments and finalize both guidance documents as quickly as it can.

5. Blood Plasma Products

The Committee notes that the FDA has followed the Committee's advice from fiscal year 2015 and is addressing the issue of the use of plasma for post-collection manufacture into critical plasma derivatives, no matter the manner in which the blood is collected. The Committee urges the FDA to prioritize developing policies to allow for the more timely use of plasma from

automated donations into other biologics and asks that the FDA update the Committee on its progress with a report no later than 60 days after enactment of this Act.

FDA Response:
FDA will provide the requested report.

6. Blood Product Policies

Last December, the FDA released draft guidance for industry entitled "Bacterial Detection Testing by Blood Collection Establishments and Transfusion Services to Enhance the Safety and Availability of Platelets for Transfusion." As the agency is aware, the Committee issued report language in fiscal year 2012 expressing concern for the safety risks to transfusion patients from bacterially contaminated platelets. The Committee is pleased to see the agency take the step of releasing draft guidance. Unfortunately, when the FDA released its guidance agenda for 2015, the final version of this draft guidance was not listed among the agency's priorities. This is an important safety issue, and it is essential that the agency complete the guidance process in a timely manner. The Committee urges the FDA to do so as quickly as possible.

FDA Response:
FDA issued draft guidance in December 2014, "Bacterial Detection Testing by Blood Collection Establishments and Transfusion Services to Enhance the Safety and Availability of Platelets for Transfusion; Draft Guidance for Industry". Taking into account public comments and the recent approval of a pathogen reduction technology for a widely used method of preparing platelets, FDA intends to issue a revised draft guidance for comment before finalizing the guidance. In May 2015, FDA published a final rule Requirements for Blood and Blood Components Intended for Transfusion or for Further Manufacturing Use (80 FR 29842). This final rule "requires establishments to have procedures to control the risks of bacterial contamination of platelets" (21 CFR 606.145). The final rule becomes effective in May 2016. The FDA's revised draft guidance will provide recommendations for complying with this regulatory requirement.

7. Cord Blood Regulation

The Committee directs the FDA to undergo a review and seriously consider the potential need for revision of the current regulatory requirements for cord blood licensure, particularly those related to manufacturing and storage, to ensure the correct applicability to this industry since the current regulatory requirements are the same ones that apply to pharmaceutical products. In addition, the Committee directs the FDA to create an advisory task force, comprised at a minimum of public and private cord blood bankers, transplanters and patients, to provide recommendations to the agency about the current licensing requirements and changes that may be necessary.

FDA Response:
FDA developed an innovative regulatory paradigm for minimally manipulated, unrelated allogeneic placental/umbilical cord blood (HPC, Cord Blood) through extensive outreach and collaboration with our stakeholders. This regulatory program has resulted in HPC, Cord Blood units that are manufactured more consistently without interfering with product availability.

The manufacturing and storage requirements, as well as other requirements, were developed in collaboration with our stakeholders through various means including: two meetings of the Cellular, Tissue, and Gene Therapy Advisory Committee; development of the final guidance, ''Class II Special Controls Guidance Document: Cord Blood Processing System and Storage Container;" two rounds of guidance development regarding recommendations for IND and

Biologics License Application submissions for HPC, Cord Blood; a cord blood licensure workshop; outreach to the Health Resources Services and Administration (HRSA); outreach to the National Marrow Donor Program (NMDP); outreach at professional meetings; more than 10 pre-BLA meetings with stakeholders; and through participation as a liaison to the HHS Advisory Council on Blood Stem Cell Transplantation (ACBSCT).

The ACBSCT advises the Secretary of HHS and the Administrator of HRSA on the activities of the C.W. Bill Young Cell Transplantation Program and the National Cord Blood Inventory (NCBI) Program. Members of the ACBSCT include representatives of marrow donor centers, transplant centers, and cord blood banks, patient and patient family representatives, scientists, ethicists, and members of the general public.

In addition, FDA has met recently with the NMDP and representatives of licensed cord blood banks to discuss lessons learned and identify ways in which FDA and the industry may work together to facilitate further development of HPC, Cord Blood products. Based on the input obtained, the manufacturing and storage requirements are considered appropriate for HPC, Cord Blood licensure, and FDA is committed to working with industry to improve best practices under the current regulations.

8. Cosmetics and Colors

The Committee directs the FDA to spend no less than the fiscal year 2015 level for cosmetics activities as well as for the Office of Colors and Cosmetics (OCAC). Funding provided for OCAC is for direct support of the operation, staffing, compliance, research, and international activities performed by this office. The Committee notes that, for the past five years, it has directed the FDA to respond to the Citizen Petition requesting that the FDA establish a safe level for lead as a nonfunctional constituent in lipstick. The Committee is aware that in 1975 the cosmetic industry asked the FDA to evaluate the safety of ingredients found in its products. Consistent with this commitment, in 1976 the cosmetic industry established the Cosmetic Ingredient Review (CIR) under which the safety of approximately 3,880 ingredients has been reviewed by an Expert Panel of independent scientists, and the FDA has participated through a nonvoting liaison at all meetings of the Expert Panel. The Committee directs the FDA to respond to the Citizen Petition on this lipstick ingredient by December 31, 2015.

FDA Response:
OCAC will use FY 2016 funding for direct support of the operation, staffing, compliance, research, and international activities performed by this office. As noted in our response to the Committee last year, FDA sponsored and completed additional studies to address data gaps regarding trace amounts of lead in cosmetic products. FDA has evaluated data from these studies and other relevant information and has worked to respond fully to the citizen petition.

9. Cosmetic Ingredient Review Panel

As noted, the cosmetic industry established the CIR as a means to assure the safety of ingredients in cosmetic products. Given the breadth and volume of ingredients reviewed and the scientific expertise applied to its process, it is the Committee's belief CIR should be recognized and formalized as a public-private program. The Committee therefore directs that the FDA work with the cosmetic industry to transfer the CIR to the United States Pharmacopeia Convention (USP) or some other appropriate third body for the purpose of evaluating and determining the safety of ingredients found in cosmetics. USP is a widely respected independent scientific organization whose drug standards are explicitly incorporated under the Federal Food, Drug, and

Cosmetic Act (FDCA). The Committee directs that the FDA, working cooperatively with the cosmetic industry, report back to the Committee no later than January 15, 2016, with a framework and a detailed plan.

FDA Response:
While FDA will prepare the requested report, the Committee's directive raises significant appearance concerns and resource issues that will be addressed in the report. The CIR is a private, industry-funded organization, and FDA believes that enhancing the authority and stature of a private organization is inappropriate for a Federal regulatory agency. In addition, charging a public-private partnership with determining the safety of cosmetic ingredients – an activity within the Agency's statutory purview – may create the appearance that the partnership's determinations represent formal FDA determinations.

10. Drug Compounding

The Committee is concerned that, since passage of the Drug Quality and Security Act (DQSA) of 2013, FDA has interpreted provisions of Section 503A of the FDCA in a manner inconsistent with its legislative intent and with the agency's own previous positions. Specifically, the FDA has taken the position that under 503A, a pharmacist may not compound medications prior to receipt of a prescription and transfer the drugs to a requesting physician or other authorized agent of the prescriber for administration to his or her patients without a patient-specific prescription accompanying the medication. This practice, which is often referred to as "office-use" compounding, is authorized in the vast majority of states and was intended to be allowable under DQSA. The Committee is aware that in 2012, prior to passage of the DQSA, FDA was working on a draft compliance policy guide for 503A of the FDCA that provided guidance on how "office-use" compounding could be done consistent with the provisions of 503A. The Committee understands the intent of the DQSA was not to prohibit compounding pharmacists from operation under existing 503A exemptions; therefore, the Committee directs the FDA to issue a guidance document on how compounding pharmacists can continue to engage in "office-use" compounding before the receipt of a patient-specific prescription consistent with the provisions of 503A within 90 days after the enactment of this Act.

FDA Response:
FDA is considering the report language concerning office use in FY 2015 House Report 114-205. FDA recognizes that sometimes it is necessary for health care practitioners in hospitals, clinics, offices, or other settings to have certain compounded drug products on hand that they can administer to a patient who presents with an immediate need for the compounded drug product. For example, if a patient presents at an ophthalmologist's office with a fungal eye infection, timely administration of a compounded antifungal medication may be critical to preventing vision loss.

In such a case, the prescriber may need to inject the patient with a compounded drug product immediately, rather than writing a prescription and waiting for the drug product to be compounded and shipped to the prescriber. In other cases, compounded drug products may need to be administered by a health care practitioner in his or her office because it would not be safe for the patient to take the drug home for self-administration, and it would not be practical for the patient to bring a prescription for the compounded drug product to a pharmacy and then return to the health care practitioner for administration.

Although compounded drugs can serve an important need, they pose a higher risk to patients than FDA-approved drugs. Compounded drug products are not FDA-approved, which means they have not undergone FDA premarket review for safety, effectiveness, and quality. In addition, licensed pharmacists and licensed physicians who compound drug products in accordance with section 503A are not required to comply with current good manufacturing practice (CGMP) requirements.

Furthermore, FDA does not interact with the vast majority of licensed pharmacists and licensed physicians who compound drug products and seek to qualify for the exemptions under section 503A of the FD&C Act for the drug products they compound because these compounders are not licensed by FDA and generally do not register their compounding facilities with FDA. Therefore, FDA is often not aware of potential problems with their compounded drug products or compounding practices unless it receives a complaint such as a report of a serious adverse event or visible contamination.

In 2012, contaminated injectable drug products that a compounding pharmacy shipped to patients and health care practitioners across the country caused a fungal meningitis outbreak that resulted in more than 60 deaths and 750 cases of infection. This outbreak was the most serious of a long history of outbreaks associated with contaminated compounded drugs. Since the 2012 fungal meningitis outbreak, FDA has investigated numerous other outbreaks and other serious adverse events, including deaths, associated with compounded drugs that were contaminated or otherwise compounded improperly.

FDA has also identified many pharmacies that compounded drug products under insanitary conditions whereby the drug products may have been contaminated with filth or rendered injurious to health, and that shipped the compounded drug products made under these conditions to patients and health care providers across the country, sometimes in large amounts. The longer a compounded sterile drug product that has been contaminated is held by a pharmacist or physician before distribution, or held in inventory in a health care facility before administration, the greater the likelihood of microbial proliferation and increased patient harm. Because of these and other risks, the FD&C Act places conditions on compounding that must be met for compounded drugs to qualify for the exemptions in section 503A.

In establishing policies on office use, FDA intends to consider important public health issues, including the need for access to products for office use and the need to protect patients from poor quality compounded products, as well as the statutory language in section 503A of the Federal Food, Drug, and Cosmetic Act, the category of outsourcing facilities created by new section 503B of the Act, and the need to provide a clear line between permissible compounding and impermissible manufacture of unapproved drugs.

11. Drug Labeling Approval

The Committee acknowledges FDA's actions over the past six months regarding the proposed rule, "Supplemental Applications Proposing Labeling Changes for Approved Drugs and Biological Products," to include a listening session on March 27, 2015, and a reopened comment period that closed on April 27, 2015. However, the Committee continues to be concerned with FDA actions from the beginning of this process and the subsequent failure to find closure on this issue. As things currently stand, the rule would allow a generic drug manufacturer to alter its safety labeling unilaterally without FDA's prior approval, even if there is more than one generic manufacturer or an innovator manufacturer and generic manufacturer marketing the same bioequivalent drug (a "multisource" drug), and other companies are not required to make a

corresponding labeling change. p. 64 The proposed rule has the potential to threaten public health by creating unprecedented patient and provider confusion by having multiple labels for bioequivalent products. The Committee urges the FDA to finalize the rule based upon comments it received in the docket and during the March 27 public meeting to meet the stated objectives of ensuring that patients have the most complete and up-to-date information regarding their prescription drugs. The final rule should establish: (1) FDA as the final decision maker of whether or not a manufacturer should change its labeling in a multisource environment; (2) a process by which the FDA collects and utilizes all safety information to determine if a labeling change is required—from the new safety information from the manufacturer to sources such as the Sentinel System and other global databases; (3) a process by which the FDA has defined time parameters to take action on new safety information provided by innovator or generic application holders; and, (4) a process by which manufacturers should have a defined time period to make the corresponding labeling change. A final rule with these minimum requirements should be grounded in scientific evidence, and present no opportunity for mismatched dispensing or use information between the innovator drug and the generic version drug.

FDA Response:
The proposed rule is intended to improve the communication of important drug safety information to healthcare professionals and patients. FDA has received a great deal of public input from stakeholders during the comment period on the proposed rule regarding the best way to accomplish this important public health objective.

FDA is carefully considering comments submitted to the public docket established for the proposed rule from a diverse group of stakeholders including: consumers and consumer groups, academia (including economists), health care associations, drug and pharmacy associations, brand and generic drug companies, law firms, state governments, and Congress, including comments proposing alternative approaches to communicating newly acquired safety-related information in a multi-source environment (see FDA-2013-N-0500). These comments include a summary of FDA's meeting with the Generic Pharmaceutical Association (GPhA) on September 8, 2014, to listen to their comments and views regarding the proposed rule.

In addition, FDA held a public meeting at which any stakeholder had the opportunity to present or comment on the proposed rule, or on any alternative proposals intended to improve communication of important, newly acquired drug safety information to healthcare professionals and the public. In the February 18, 2015, notice announcing the public meeting, FDA reopened the docket for the proposed rule until April 27, 2015, to allow the submissions of written comments concerning proposals advanced during the public meeting. FDA will determine next steps based on our analysis of comments on the proposed rule and additional information submitted as part of the public meeting.

12. Duchenne Muscular Dystrophy

The Committee is aware that the FDA recently released draft guidance for the development of drugs to treat Duchenne Muscular Dystrophy and related issues. The Committee commends FDA for working with patient groups and urges them to continue this collaborative approach when evaluating the medical needs of a rare disease community.

FDA Response:
FDA is committed to engaging with patient groups to receive valuable input during the evaluation of the medical needs of patients with rare diseases whenever appropriate. We appreciate the guidance that members of the Duchenne muscular dystrophy (DMD) community

submitted to FDA in June 2014. FDA announced the DMD community's guidance through a Federal Register notice (September 4, 2014) to seek additional guidance and public comment. FDA carefully considered the consortium's guidance and public comments received in response to it in writing the agency's own draft guidance.

The draft guidance for industry, "Duchenne Muscular Dystrophy and Related Dystrophinopathies: Developing Drugs for Treatment," was released in June 2015, and a 60-day comment period was provided. We are currently reviewing the comments received and plan to issue a final guidance in 2016. The purpose of the guidance to industry is to assist sponsors in the clinical development of drugs for treating X-linked Duchenne muscular dystrophy and related dystrophinopathies, and to serve as a focus for continued discussions on this topic.

13. FDA Partnerships Under FSMA

The purpose of FSMA is to reform the nation's food safety laws to ensure a safe public food supply. As the FDA continues implementation of FSMA, the Committee encourages the FDA to work in partnership with existing government food safety programs, including the use of MOUs, to verify compliance with FSMA rules once they are finalized as a way to eliminate duplication of activities under the law. In addition, the Committee provides an increase of $2.5 million for the Food Safety Outreach Program under NIFA, and expects that, per the proposal in the President's fiscal year 2016 budget request, NIFA will serve as the sole agency providing food safety training, education, outreach, and technical assistance at the farm level.

FDA Response:
FDA agrees that a strong partnership with existing state and local food programs is critical to achieving high rates of compliance with FSMA and other existing food safety laws and regulations. FDA is committed to continuing our strong partnership with existing government food safety programs to implement FSMA and achieve an Integrated Food Safety System. FDA will continue to use Memoranda of Understanding, in addition to contracts, grants, and cooperative agreements and other vehicles for this partnership. Both FDA and NIFA will continue to work with Regional Centers and the National Coordination Center to provide food safety training, education, outreach, and technical assistance at the farm level.

14. Food Contact Notification User Fees

The funds made available by this Act include sufficient monies to fund the FDA's Food Contact Notification Program and shall be deemed to satisfy the requirements of 21 U.S.C. 348(h)(5)(A). The Committee recommendation does not include proposed user fees.

FDA Response:
CFSAN will continue to support the Food Contact Notification (FCN) program in FY 2016 with appropriated funding. Over the last three years, more than 100 FCNs per year have become effective. Given the significant number of FCNs received and evaluated per year, however, user fees would improve the program's reliability and predictability. Fees would allow the program to continue to operate at a high level of production, and without disruption, by providing a reliable source of funding. User fees are a particularly appropriate form of support for FCN review because the program provides a specific benefit (authorization to market a food contact substance) to an identifiable entity – the entity submitting the FCN, who is usually the producer of the food contact substance.

15. Generic Drug User Fee Facility Fees

When the FDA begins the process for GDUFA reauthorization negotiations on June 15, 2015, the Committee urges all stakeholders to carefully consider providing fee waivers, exemptions, or otherwise reduced fees for small generic drug manufacturers to minimize the disproportionate financial burden on these companies.

FDA Response:
As part of the GDUFA reauthorization process a small business workgroup was formed between industry and FDA to address this issue and evaluate proposals. At the conclusion of the negotiations, FDA will report out on the proposed GDUFA II agreement.

16. Genomic Editing

The Committee understands the potential benefits to society in the genetic modification of living organisms. However, researchers do not yet fully understand all the possible side effects of editing the genes of a human embryo. Editing of the human germ line may involve serious and unquantifiable safety and ethical issues. Federal and non-Federal organizations such as the National Academy of Sciences and National Academy of Medicine will soon engage in more extensive scientific analysis of the potential risks of genome editing and a broader public discussion of the societal and ethical implications of this technique. In accordance with the current policy at the National Institutes of Health, the Committee includes bill language that places a prohibition on the FDA's use of funds involving the genetic modification of a human embryo. The Committee continues to support a wide range of innovations in biomedical research, but will do so in a fashion that reflects well-established scientific and ethical principles.

FDA Response:
FDA actively supports the National Academy of Sciences and National Academy of Medicine study of the scientific, medical, societal, and ethical implications of human germ line gene editing.

FDA acknowledges that the current appropriation directs, "None of the funds made available by this Act may be used to notify a sponsor or otherwise acknowledge receipt of a submission for an exemption for investigational use of a drug or biological product under section 505(i) of the Federal Food, Drug, and Cosmetic Act (21U.S.C. 355(i)) or section 351(a)(3) of the Public Health Service Act (42 U.S.C. 262(a)(3)) in research in which a human embryo is intentionally created or modified to include a heritable genetic modification. Any such submission shall be deemed to have not been received by the Secretary, and the exemption may not go into effect."

17. Harm Reduction

It is the Committee recommendation that the FDA consider the benefits of harm reduction as part of evaluations under the Deeming regulations for tobacco products.

FDA Response:
FDA recognizes that there is a continuum of risk for users of tobacco products. The agency will rely on sound science to evaluate the public health impact of new FDA-regulated tobacco products. The Agency has taken multiple actions concerning harm reduction. These actions include issuing draft guidance on modified risk tobacco products and - in the proposed deeming regulation – soliciting comments on the continuum of risk and how it should impact regulatory policy. The concept of risk also plays a role in the agency's evaluation of new products. For example, in the premarket tobacco application context, the agency's product evaluation includes an assessment of the risks and benefits to the population as a whole including users and nonusers

of the tobacco product, and takes into account the increased or decreased likelihood of initiation and cessation.

FDA also has a regulatory pathway for tobacco products that are sold or distributed to reduce harm or the risk of tobacco-related disease. These products include, for example, products whose label, labeling or advertising represents – explicitly or implicitly – that the product is less harmful or presents a lower risk of tobacco-related disease than one or more other commercially marketed tobacco products or that the product or its smoke contains a reduced level of, presents a reduced exposure to, or does not contain or is free of a substance. Under Section 911 of the Tobacco Control Act, FDA has authority to issue an order authorizing a product to be marketed as a modified risk tobacco product if the product will, or is expected to, benefit the health of the population as a whole, taking into account a number of factors including the relative health risks to individuals of the product, the likelihood that existing users of tobacco products who would otherwise stop using such products will switch to the product, and the likelihood that persons who do not use tobacco products will start using the product.

Applicants seeking a risk modification order under Section 911(g)(1) must demonstrate that the product, as actually used by consumers, will significantly reduce harm and the risk of tobacco-related disease to individual tobacco users and will benefit the health of the population as a whole.

Applicants seeking an exposure modification order under Section 911(g)(2) must demonstrate, among other things, that the product as actually used exposes consumers to the specified reduced level of the harmful substances and generally will not expose them to higher levels of other harmful substances, that consumers will not be misled by the product's labeling/marketing into believing the product has been shown to be less harmful and that the issuance of the order is expected to benefit the health of the population as a whole.

If the modified risk tobacco product is a new tobacco product within the meaning of section 910(a)(1), any applicable premarket review requirements under section 910 of the FD&C Act must also be satisfied. FDA is currently conducting scientific review of eight modified risk tobacco product applications to determine whether the applicant has provided sufficient scientific evidence for FDA to issue a modified risk order allowing the products to be marketed as modified risk.

18. Imported Pet Food Product Transparency

As of May 15, 2015, the FDA had received approximately 5,200 reports of pet illness related to consumption of jerky pet treats, nearly all of which are imported from China. The reports involve more than 6,000 dogs, 26 cats, and 3 humans and include more than 1,100 canine deaths. These incidents date back to 2007. The Committee requests that the FDA provide it with a summary of all activities associated with the investigation into the pet illnesses associated these products, including any import alerts and import refusals, within 60 days of the enactment of this Act. In addition, the Committee requests that the agency provide it with semi-annual reports on the status of the investigation into these illnesses beginning in April 2016 until the issue has been resolved.

FDA Response:
FDA will provide the requested reports.

19. Late Reports

The Committee reminds the Commissioner that the timelines specified by the Committees on Appropriations of the House and Senate for fiscal year 2015 reports are deadlines that must be met. While the Committee notes that the FDA has made progress in providing more timely information and updates, the FDA still has several outstanding reports that are delayed due to long reviews and clearances. The Committee directs the Commissioner to submit these overdue reports.

FDA Response:
FDA has provided the requested reports.

20. Local Port Cooperation

The Committee directs FDA to work with local governments at high volume ports of entry to explore activities which reduce the risk of food borne illnesses and enhance the capacity of local officials in dealing with food borne threats.

FDA Response:
ORA does extensive work with local ports by working directly with local port authorities and U.S. Customs and Border Protection (CBP) on examination and control of FDA regulated food products at ports. ORA also works with local governments including states on food borne illness outbreaks and capacity in dealing with food borne illness.

21. Mammography Quality Assurance Advisory Committee

More than three years ago, in November 2011, the National Mammography Quality Assurance Advisory Committee approved a change to the mammogram patient report and physician report to include information regarding an individual's breast density. This process has not been completed. The Committee urges the FDA to implement this change in an expedited manner and must report to Congress on the status of this change no more than 60 days from the enactment of this Act.

FDA Response:
FDA is working to implement the recommended changes and will provide the requested report.

22. Medical Countermeasures

The Committee directs that not less than $24,552,000 shall be available for the FDA's Medical Countermeasures Initiative. This total is in addition to the unobligated funds remaining to support the FDA's emergency response to Ebola and related disease outbreaks.

FDA Response:
FDA intends to spend the amount directed by the Committee on the activities outlined.

23. Medical Gas Rulemaking

The Committee is concerned that the FDA has not initiated rulemaking to address numerous longstanding regulatory issues for medical gases despite the statutory requirement in FDASIA to issue a final rulemaking addressing all necessary changes for medical gases by July 9, 2016. Designated medical gases are a unique class of drugs that differ significantly from traditional pharmaceuticals and therefore must be addressed in the Federal drug regulations to prevent safety and enforcement issues caused by current regulations. The FDA has never responded to a 1979 Citizens Petition on expiration dating or a 1994 Citizens Petition on calculation of yield, and has not responded to a January 2014 statutorily required report on medical gas regulatory

review. Therefore, the FDA shall issue a proposed rulemaking to address each and every regulatory issue that creates safety and enforcement issues for medical gases by September 30, 2015.

FDA Response:
FDA has taken action on a number of items identified as unaddressed by the Committee. In June 2015, FDA sent the required Report to Congress on our review of Federal drug regulations related to medical gases (the June 2015 Report). FDA also responded to the 1979 and 1994 citizen petitions in June 2015.

As required in FDASIA, FDA reviewed Federal drug regulations that apply to medical gases, and submitted the June 2015 Report to Congress. FDA sought public comments through meetings and a public docket.

As described in that report, FDA has determined that the current regulatory framework is adequate and flexible enough to appropriately regulate medical gases with regard to most issues. FDA can work within the existing regulatory framework to regulate the production and distribution of medical gases without rulemaking through, for example, publication of revised guidance to industry and revisions to FDA's medical gas inspection program and related inspection training. FDA disagrees that these tools are inadequate to appropriately regulate medical gases, and specifically disagrees that the existing regulations have led to any significant safety issues in the provision of medical gases.

FDA is currently engaged in a number of activities intended to reduce regulatory uncertainty and clarify expectations for industry and other stakeholders including additional training of inspectors, implementing an updated inspection program, and updating the 2003 draft guidance for industry on current good manufacturing practices (CGMPs) for medical gases. In December 2015, FDA staff met with representatives of the medical gas industry regarding their views on the revision of the 2003 draft guidance on CGMPs.

As stated in FDA's Report to Congress on the regulation review, FDA has determined that certain regulation changes regarding warning label statements and adverse event reporting are or may be needed, and FDA will continue to evaluate the need for regulatory changes on an ongoing basis. FDA expects to maintain open communication with industry, members of Congress, and other stakeholders as appropriate, and we will continue to evaluate and address medical gas issues as needed.

The statutory deadline set in FDASIA to finalize any regulation changes that FDA has determined are necessary is July 9, 2016 (see FDASIA section 1112(b)). FDA will endeavor to meet that date for any such regulations.

24. Menu Labeling

The Committee is concerned about recent FDA final determination that increased the size and scope of those affected under restaurant menu labeling regulations. Specifically, the final rule attempts to regulate local grocery chains that typically do not qualify as restaurants. These newly regulated entities do not have clear guidance from the FDA as to how they must comply with numerous provisions of the final regulation. The Committee includes bill language that directs the FDA to implement the final rule no earlier than December 1, 2016, and at least one-year following agency publication of related guidance to newly regulated stakeholders.

FDA Response:

FDA issued a draft guidance document in September 2015 to help covered establishments comply with the menu labeling final rule, which requires calorie information to be listed on menus and menu boards in chain restaurants and similar retail food establishments with 20 or more locations doing business under the same name and offering for sale substantially the same menu items. The draft guidance responds to the many of the most frequently asked questions the Agency has received through extensive input from stakeholders throughout the process of establishing requirements for menu labeling in certain restaurants and other retail food establishments.

FDA received substantive and useful feedback in the stakeholder comments on the draft guidance and is working diligently to finalize the guidance. FDA recently extended the date for these covered establishments to comply with the FDA's menu labeling final rule by an additional year, until December 2016, to ensure that companies have adequate time to fully implement the requirements of the rule. During this one-year extension, FDA is continuing to meet with industry and will work flexibly and cooperatively with individual companies making a good faith effort to comply. In addition, we will be providing educational and technical assistance for covered establishments and for our state, local, and tribal regulatory partners to support consistent compliance. FDA believes that this cooperative approach helps to improve the dialogue surrounding the requirements and facilitates successful implementation in a practical way.

25. Off-Label Guidance

The Committee notes that in December of 2011, the FDA issued "Guidance for Industry: Responding to Unsolicited Requests for Off-Label Information About Prescription Drugs and Medical Devices", and a request for comment to assist the agency in evaluating policies for off-label uses of both approved and investigational drugs and devices. The comment period closed on March 27, 2012. Further, the FDA responded in June 2014 to two citizen petitions that were submitted to the agency in July of 2011 and September of 2013 requesting clarification of regulations and policies regarding certain communications related to investigational new drugs and investigational new devices and off-label uses of drugs and devices. In the FDA's response, the agency stated, "that it plans to issue guidance that addresses unsolicited requests, distributing scientific and medical information on unapproved new uses and manufacturer discussions regarding scientific information more generally, by the end of the calendar year." The Committee is concerned that the FDA has yet to issue new guidelines regarding the manner in which truthful and non-misleading scientific information outside of a product label for prescription drugs and medical devices can be conveyed. The Committee directs the FDA to address this issue comprehensively, outlining how manufacturers can communicate with all healthcare stakeholders, and to complete such guidelines within 60 days of enactment of this Act.

FDA Response:
FDA is examining its rules and policies on this issue; the purpose of this review is to help ensure that our implementation of FDA's legal authorities best protects and promotes the public health in view of ongoing developments in science and technology, medicine, health care delivery, and constitutional law. The Agency continues to be actively engaged in this effort and intends to issue new guidance and solicit public input in the near future.

26. Over the Counter (OTC) Medicines for Children

The Committee is concerned that the FDA has not issued a proposed rule revising the monograph regulating the labeling of OTC cough and cold products for children. The

Committee directs the agency to publish a proposed rule by November 30, 2015, based on scientific evidence for safety and efficacy in pediatric populations and taking into consideration the October 19, 2007 joint recommendations of its Pediatric Advisory Committee and Nonprescription Drugs Advisory Committee. While the Committee appreciates the agency's effort to explore possible improvements to the OTC drug monograph process; these efforts should not impede the prompt publication of this proposed rule.

FDA Response:
We share Congress' concerns over the delay in the publication of the Over-the-Counter (OTC) Cold Medicines for Children proposed rule. We have been working diligently on this rule and are committed to its publication.

New scientific methods and considerations for assessing medication use in children, particularly related to cough and cold products, are evolving rapidly and have undergone significant changes since the 2007 joint Pediatric and Nonprescription Drugs Advisory Committee meeting. FDA will continue to identify and assess new scientific methods and considerations for clinical testing of cold and cough medicines in children to develop this rule.

We understand that until this rule is published, consumers may not have the most current information regarding the use of OTC cold medicine products in general and cough-cold products in particular. Therefore, we have published a number of consumer updates (available on the FDA website) to inform consumers on the safe and effective use of OTC cold medicine products.

Examples include a checklist for choosing OTC medicines for children,[109] along with guidance on how to choose medicine for children, [110] using OTC cough cold products in children, [111] and most recently, advice on how to care for infants and young children with a cold.[112]

Finally, FDA held an advisory committee (AC) meeting on December 10, 2015, to review codeine use in children for both analgesic and cough-cold indications. This meeting follows a number of releases by FDA to inform both consumers and health care providers about the safe use of codeine in children. Further information about both the AC meeting and FDA releases about the safe use of codeine can be found online.[113]

While these consumer updates are not a substitution for the proposed rule, they provide consumers with additional knowledge to help ensure the health and safety of their children.

27. Pharmacy Compounding

The Committee is very concerned with the draft MOU that the FDA has proposed under Section 503A of the FDCA. The proposed MOU would complicate patient and prescriber access to compounded medications, and may have a deleterious effect on small pharmacies. Under the draft MOU, the FDA attempts to describe "distribution" as occurring when "a compounded human drug product has left the facility in which the drug was compounded." In the DQSA, Congress only allowed the FDA to regulate "distribution." But the MOU appears to exceed the

[109] Available at: http://www.fda.gov/downloads/drugs/resourcesforyou/consumers/buyingusingmedicinesafely/understandingover-the-countermedicines/ucm094879.pdf
[110] Available at: http://www.fda.gov/drugs/resourcesforyou/consumers/ucm312776.htm
[111] Available at: http://www.fda.gov/downloads/forconsumers/consumerupdates/ucm048524.pdf
[112] Available at: http://www.fda.gov/downloads/forconsumers/consumerupdates/ucm423252.pdf
[113] Available at: http://google2.fda.gov/search?q=codeine&client=FDAgov&site=FDAgov&lr=&proxystylesheet=FDAgov&requiredfields=-archive%3AYes&output=xml_no_dtd&getfields=*

authority granted in the statue by redefining "distribution" in a manner that includes dispensing—something unprecedented. This overreach could generate exactly the kind of costly and confusing litigation that Congress intended to avoid when it amended and reinstated Section 503A. The Committee expects that, when a final MOU is proposed as a model agreement for the states to consider, that distribution and dispensing are treated as the different and separate activities that they actually are.

FDA Response:
Section 503A of the FD&C Act describes the conditions that must be satisfied for a drug compounded by a licensed pharmacist in a State licensed pharmacy or Federal facility, or by a licensed physician, to qualify for exemptions from section 505 (concerning pre-market approval requirements), section 502(f)(1) (concerning labeling with adequate directions for use), and section 501(a)(2)(B)(concerning current good manufacturing practice requirements).

Congress left intact as one of the conditions necessary to qualify for the exemptions listed in section 503A of the FD&C Act that

(1) the drug product is compounded in a State that has entered into an MOU with FDA that addresses the distribution of inordinate amounts of compounded drug products interstate and provides for appropriate investigation by a State agency of complaints relating to compounded drug products distributed outside such State

(2) if the drug product is compounded in a State that has not entered into such an MOU, the licensed pharmacist, pharmacy, or physician does not distribute, or cause to be distributed, compounded drug products out of the State in which they are compounded in quantities that exceed 5 percent of the total prescription orders dispensed or distributed by such pharmacy or physician (see section 503A(b)(3)(B)(i) and (b)(3)(B)(ii) of the FD&C Act).

Even though the statute did not direct FDA to obtain public input on the draft standard MOU, other than the consultation with NABP, FDA is engaging in a public process to obtain comments on the draft standard MOU. FDA is soliciting public input from the public generally through written comments to the docket, and has also discussed the proposed MOU with representatives from the 50 states.

FDA discussed the concepts it was considering for the MOU at Intergovernmental Working Meetings with representatives of the 50 States and NABP in March, 2014. After the draft standard MOU was published for comment, FDA discussed the published draft at Intergovernmental Working Meetings with representatives of the 50 States in March, 2015, and again in November, 2015, after the comment period closed. FDA received over 3,000 comments to the docket on the draft MOU. FDA is considering all of the comments, including comments on the definition of "distribution," as we work to finalize the MOU.

28. Prescription Drug Labeling Inserts

The Committee is aware of FDA proposals that would subvert repeatedly expressed Congressional intent by permitting the distribution of prescription drugs without printed prescribing information on or within the packages from which such drugs are to be dispensed. The FDA intends to replace such printed labeling with an electronic labeling system for the majority of prescription drugs. On several occasions Congress has directly declined to provide the FDA the necessary statutory authority to implement this change. As recently as 2012, Congress commissioned a GAO report (GAO-13-592) discussing this issue. The GAO report concluded that such a change could adversely impact public health. Thus, the Committee is very

concerned that the FDA is moving to promulgate a regulation that would generally eliminate printed prescribing information inserts for prescription drugs. Therefore, the Committee has included a provision prohibiting the FDA from utilizing any funds to propose or otherwise promulgate any rule that requires or permits any prescription drug or biologic products to be distributed without printed prescribing information on or within the packaging from which such products are to be dispensed, unless such actions are expressly provided by an amendment to the FDCA.

FDA Response:
The referenced GAO report addressed both professional and patient labeling. However, the proposed rule pertains only to professional labeling for prescription drugs —it does not propose any changes to the distribution of patient labeling for prescription drugs. Also, the provision on electronic drug labeling may impair FDA's ability to modernize the system for disseminating drug information and take advantage of technological advancements. Such advancements now make it possible for healthcare providers to access new safety information about the drugs and biological products they are prescribing and dispensing much quicker than the current system, thereby enabling them to make decisions about patient care based on the most up-to-date information possible.

Additionally, under the proposed rule, FDA on its own initiative or upon request from a manufacturer can exempt a product from the electronic distribution requirements if compliance could adversely affect the safety, effectiveness, purity or potency of the drug, is not technologically feasible, or is otherwise inappropriate. The rule also proposes to require drug manufacturers to provide labeling in paper format to any patient or provider upon request.

29. Scientific Integrity

Pursuant to the President's 2009 memorandum and as directed by the Office of Science and Technology Policy, the FDA adopted a scientific integrity policy in 2012. It appears to conform to the President's directive by maintaining a firm commitment to science-based, data-driven decision making, facilitating the free flow of scientific and technical information, and requiring a fair and transparent approach to resolving scientific disputes. The Committee directs the Commissioner to ensure all FDA centers agencies are complying with the policy and using it to guide their policy and regulatory decisions.

FDA Response:
FDA's policies related to scientific integrity currently apply to all Agency components and employees. The Office of Scientific Integrity within the Office of the Commissioner is regularly working with the Agency's centers and other components to ensure compliance with these policies and encourages employees to report deviations from them.

30. Scientific Study Data

Sound science, peer review and transparency are essential to effective protection of public health. The Committee is concerned that data from scientific studies utilized in forming public policy may not be available for public review, even under Freedom of Information Act requests. The Committee believes that if public policy is based on a scientific study, that study should be available for public review. The Committee urges the FDA to immediately provide, on its website, the data and studies it uses to support public policy used by the FDA or other Federal agencies based on FDA studies.

FDA Response:

FDA shares the objectives of transparency and maximization of public access to the results of research underlying our regulatory decisions. Accordingly, FDA has issued a Staff Manual Guide 2126.4related to the public access to FDA-funded peer-reviewed publications and digitally stored data. [114] FDA has also established a webpage to inform the public of this new initiative.[115]

With the passage of the Food and Drug Administration Amendments Act of 2007, sponsors of certain clinical trials involving FDA-regulated products also became subject to expanded requirements to publicly disclose information. Furthermore, when FDA approves medical products, FDA regularly publishes on its website non-privileged information regarding the scientific basis for those approvals.

31. Sodium Intake Levels

The Committee is concerned about the FDA's continued focus on voluntary sodium reductions and recommendations to remove the GRAS status of sodium given the growing body of evidence that suggests low sodium consumption can lead to health problems in healthy individuals. The Committee requires the FDA, in coordination with CDC, to convene a panel at the IOM to determine the blood pressure effect and Cardiovascular Disease (CVD) implications for healthy people consuming sodium at 3000 mg or less per day. Federal funds should not be expended on sodium reduction activities below 3000 mg per day until the science is formally considered surrounding healthy and safe sodium intake, especially for healthy individuals, and the impact of lower sodium on blood pressure (and an extrapolation to health), including direct research suggesting a negative impact of lower sodium on health.

FDA Response:
Americans are consuming excess sodium, which contributes to increased risk of hypertension, a primary contributor to stroke and heart disease. FDA and its federal partners, including the CDC, have been focusing on voluntary reductions to move from a current sodium intake of about 3,400 milligrams (mg) in the U.S. to a value closer to 2,300 mg per day.

About 75 percent of sodium in the diet is estimated to be added during the manufacturing of foods and preparation of restaurant foods, making it difficult for consumers to reduce their sodium intake (Anderson et al., 2010; Mattes and Donnelly, 1991). Encouraging industry to reduce sodium in products so consumers have more options does not require bringing consumers into an excessively low sodium intake range. U.S. government efforts are not focused on reducing sodium to below 2,300 mg per day.

The 2013 IOM report entitled *Sodium Intake in Populations: Assessment of Evidence* reaffirmed that sodium intake levels are too high and should be reduced to 2,300 mg per day. This recommendation is also supported by the Scientific Report of the 2015 Dietary Guidelines Advisory Committee (DGAC), which thoroughly considered the 2013 IOM Sodium Report and other evidence in their review, and also the 2015-2020 Dietary Guidelines for Americans.

FDA is aware of recent observational studies (Stolarz-Skrzypek et al., 2011, O'Donnell et al., 2011; O'Donnell et al., 2014; Graudal et al., 2014) that are inconsistent with the large body of evidence that consistently shows a dose-response relationship between sodium intake and blood pressure (Aburto et al., 2013; Sacks et al., 2001; He et al., 2013, Mozaffarian et al., 2014; Eckel et al., 2014).

[114] Available at: http://www.fda.gov/downloads/AboutFDA/ReportsManualsForms/StaffManualGuides/UCM479268.pdf
[115] Available at: http://www.fda.gov/ScienceResearch/AboutScienceResearchatFDA/ucm433459.htm

Results of these recent observational studies suggest low- and high-sodium intakes are associated with cardiovascular disease (CVD) events or deaths, and are inconsistent with other observational studies showing lower-sodium intake is associated with lower risk of CVD (Cook et al., 2014; Poggio et al., 2015). Like other studies reviewed by IOM in 2013 and an American Heart Association Scientific Advisory Committee in 2014 (Cobb et al., 2014), these studies have major limitations in the selection of participants and/or measurement of sodium intake. Expert review of these studies by FDA and the Centers for Disease Control and Prevention indicate that these recent observational studies do not shift the weight of evidence.

High blood pressure is a leading risk factor for heart disease and stroke (Stamler et al., 1993; Kannel et al., 1996; van den Hoogen et al., 2000; O'Donnell et al., 1997, Prospective Studies Collaboration, 2002). Reducing average sodium intake in the U.S. population can reduce blood pressure and save tens of thousands of deaths and billions of health care dollars each year (Coxson et al., 2013; Bibbins and Domingo, 2010; Huang et al., 2014a).

32. Spent Grains

The Committee recognizes that the FDA took into consideration public comments and revised some of its proposed regulations on spent grains used for animal food. Processors already complying with FDA human food safety requirements would not need to implement additional preventive controls when supplying a by-product like wet spent grains for animal food. However, further processing a by-product for use as animal food such as drying spent grains, would require additional compliance under the proposed rule. The FDA has said potential hazards associated with spent grains are minimal, and steps to prevent contamination are likely already in place. The Committee includes bill language to ensure dry and wet spent grains used for animal food are regulated equally.

FDA Response:
The FDA Food Safety Modernization Act (FSMA) passed by Congress established requirements for hazard analysis and preventive controls to control hazards in food. FDA is required to implement the preventive controls system for both human and animal food. In its final rulemaking, FDA also established current good manufacturing practice regulations (CGMPs) for animal food.

Some human food processors, including alcoholic beverage production facilities, also produce by-product, such as wet spent grains, for use as animal food. If these processors are already subject to and in compliance with human food CGMPs and applicable human food safety requirements of the FD&C Act and FDA regulations, and they do not further process the by-product, then the preventive controls and CGMP regulations do not apply to the by-product, except limited CGMPs to prevent contamination when holding and distributing the by-product.

FDA is committed to helping ensure that animal food originating from the alcoholic beverage industry is safe for its intended use and not adulterated. Although Section 750 prohibits FDA from using its appropriated resources to implement or enforce any provision of FSMA with respect to the distribution, sale, or receipt of dried spent grain byproducts of the alcoholic beverage production process, FDA can continue to use resources to implement and enforce other applicable provisions of the FD&C Act for these spent grains. For example, any further processing of by-products of the alcoholic beverage industry, such as drying wet spent grains, must be done in accordance with CGMPs.

The CGMP requirements related to further processing human food by-product for use as animal food apply to other types of human food by-product and are not targeted solely to the drying of spent grains. These requirements will be applied consistently across the human food industry to help ensure that when human food by-products are further processed, they are processed in a way that keeps them safe for use as animal food. When processing by-products for use as animal food, a human food facility has the option of following either the human food CGMPs in 21 CFR part 117, subpart B or the animal food CGMPs in 21 CFR part 507, subpart B.

33. Sunscreen Ingredient Applications

The Committee is concerned that another year has passed without the FDA completing its review of the pending Time and Extent Applications (TEAs) and the OTC Monograph rulemakings on sunscreens. Immediate action on sunscreen applications should be a priority since the need for sunscreens is evident by the nearly five million people that are treated annually for all skin cancers and the fact that melanoma is the fifth leading cause of cancer in the U.S. this year. The bill provides the requested funding of $716,000 for the FDA to complete timely reviews of filed requests and determine the safety and efficacy of sunscreen ingredients.

FDA Response:
The Sunscreen Innovation Act (SIA) imposes on FDA strict deadlines for making determinations about the generally recognized safe and effective (GRAS/E) status of these ingredients. It does not relax the scientific standards for evaluating safety and effectiveness or the requirement for sponsors to provide adequate data on which to base a GRAS/E determination.

As per the timelines in the SIA, FDA has completed reviews for all pending Time and Extent Applications for review of nonprescription sunscreen active ingredients and has tentatively determined that the pending sunscreen active ingredients are not GRAS/E for use in OTC sunscreens because the data are insufficient. FDA described the additional data needed to determine that a particular nonprescription sunscreen active ingredient is GRAS/E and not misbranded in the proposed sunscreen orders it has issued under the SIA for each of the pending requests regarding nonprescription sunscreen active ingredients. The data described are in line with the safety data FDA is currently seeking for other topical nonprescription active ingredients under the OTC drug monograph system and for both topical prescription and nonprescription drugs seeking approval under the new drug application (NDA) process.

In addition, FDA has held public meetings with sponsors of pending requests for nonprescription sunscreen active ingredients to discuss data requirements and has issued draft guidance, as required by the SIA, to further delineate safety and effectiveness data needed to make a GRAS/E determination for a nonprescription sunscreen active ingredient. No data have been received, and there are no timelines imposed by the SIA for industry to submit this data. FDA looks forward to receiving and reviewing necessary industry data on which to base a (GRAS/E) determination.

FDA is committed to doing its part to provide American consumers with additional options for safe and effective nonprescription sunscreen active ingredients. However, FDA relies on industry to submit the data needed for review in order to support a GRAS/E determination. Americans deserve sunscreen products that are shown to be safe and effective. FDA has proposed data requirements that will allow us to determine that sunscreen active ingredients are generally recognized as safe and effective for use in nonprescription sunscreens. These data requirements were unanimously supported by a panel of scientific experts at a September 2014 public Advisory Committee meeting on sunscreens.

34. Sunscreen Ingredients and Report

Thirteen years have passed without FDA final decisions on sunscreen ingredients that have been used around the world for many years. FDA's inaction is particularly concerning because bipartisan reforms were enacted in the Sunscreen Innovation Act (SIA) addressing all of the issues identified as impediments by the FDA. The Surgeon General called on the Federal government to work with stakeholders to support skin cancer prevention and yet the FDA has still not approved a new sunscreen product since the 1990s. The FDA shall produce a report to the Committee by September 1, 2015, that contains a detailed analysis of how the FDA is balancing the Surgeon General's Call to Action, the known public health benefits that regular sunscreen use provides to prevent skin cancer and melanoma, and the long history of safe and effective use of sunscreens currently backlogged at the FDA in comparable countries versus the hypothetical risk sunscreens posed to human health in FDA's GRAS standard. Furthermore, the FDA shall issue draft guidance for industry outlining data required for sunscreen active ingredients to meet the FDA's safety and efficacy standards and meet SIA's statutory deadlines for publication. The bill provides $716,000 for FDA's sunscreen activities.

FDA Response:
The Sunscreen Innovation Act (SIA) sets forth timelines within which FDA is required to take certain actions on pending and sunscreen Time and Extent Applications (TEAs) and new requests under the SIA. It also imposes on FDA requirements to issue certain guidances, proposed and final rules, and reports to Congress.

The SIA requires FDA to, among other things:

- Issue a notice in the Federal Register of the availability of the feedback letters deemed to be proposed orders under the SIA for the six sunscreen TEAs that had received feedback letters within 45 days of its enactment. – Completed on January 7, 2015.
- Complete evaluation of available data for the two pending sunscreen active ingredient requests that had not received feedback letters at the time of enactment of the SIA and issue proposed sunscreen orders within 90 days – Completed on February 24, 2015.
- Conduct meetings, if requested, with sponsors of each of the eight pending requests that had received proposed sunscreen orders within 45 days of request – FDA has received four requests for meetings and has convened all meetings within the required timeframe
- Issue four draft guidances, including a draft guidance outlining safety and effectiveness data required determining whether a nonprescription sunscreen active ingredients is GRAS/E, within one year of enactment. – Completed on November 20, 2015
- Amend and finalize the sunscreen monograph regulations within five years (November 26, 2019) which will involve issuing a proposed and final rule.

FDA has met its statutory obligations under the SIA to date and appreciates the appropriated funds which will facilitate continuing this important work. FDA now looks forward to receiving and reviewing necessary industry data on which to base a generally recognized safe and effective (GRAS/E) determination for nonprescription sunscreen active ingredients. FDA continues to strive to meet the remaining deadlines, including the report to Congress, and plans to finalize the draft guidance documents in 2016.

35. Surrogate Endpoints

The Committee urges the FDA to issue guidance on the use of surrogate and intermediate endpoints for accelerated approval of regenerative medicine products under section 506(c) of the

FDCA (21 U.S.C. 356(c)). In the process of issuing guidance, the FDA shall consult with appropriate stakeholders in the development of this guidance.

FDA Response:
FDA continues to be committed to helping sponsors in this area through extensive interactions such as early pre-Investigational New Drug meetings, educational sessions, workshops, advisory committee meeting discussions, and issuance of guidance. Regenerative medicine is a rapidly evolving field that encompasses a broad spectrum of products, such as skin grafts, drugs to help regenerate the liver, artificial organs made of living cells on device scaffolds, and delivery of cells into the brain to restore aspects of function. Regenerative medicine may incorporate use of drugs, biologics, devices, and combinations of these.

Accelerated approval using surrogate or intermediate endpoints is only one regulatory tool that could be utilized in facilitating development and review of regenerative medicine products. Identifying specific surrogate and intermediate endpoints for accelerated approval of regenerative medicine products could be counterproductive, however, because such specifications risk prematurely defining the field in a way that could limit exploration of innovative treatments. Rather, FDA considers proposals for surrogate and intermediate clinical endpoints on a case-by-case basis, in order to allow the greatest regulatory flexibility to facilitate the development of each of these novel products. FDA has an Expedited Programs guidance delineating the use of surrogate and intermediate endpoints for accelerated approval that applies to regenerative medicine products that are drugs and biologics, and a similar guidance for devices.

36. User Fee Collections/Obligations

The Committee continues to be concerned about the financial management of the FDA's user fee programs. The Committee directs that not later than 30 days after enactment of this Act, and each month thereafter through the months covered by this Act, the Commissioner to submit to the Committees on Appropriations of the House and Senate a report on user fees collected for each user fee program included in the Act. The report shall also include monthly obligations incurred against such fee collections. The first report shall include a distinct categorization of the user fee balances that are being carried forward into fiscal year 2017 for each user fee account as well as a detailed explanation of what accounts for the balance and what the balance will be used for.

FDA Response:
FDA will provide the requested reports.

SENATE APPROPRIATIONS COMMITTEES SIGNIFICANT ITEMS

SENATE COMMITTEE REPORT (S. 114-82)

1. Active Pharmaceutical Ingredients

The Committee is concerned that the FDA has not yet approved a list of active pharmaceutical ingredients [APIs] for use by compounding pharmacists pursuant to the Federal Food, Drug, and Cosmetic Act [FDCA]. Within 90 days of the enactment of this act, the FDA is directed to provide a timeline for when the remaining substances will be considered, and in the meantime re-consider its policy with regard to enforcement of the bulk drug substances provisions under section 503A.

FDA Response:
FDA will provide the requested report.

2. Alcohol Based Hand Sanitizers

The Committee strongly supports the systematic review of healthcare antiseptic active ingredients used in alcohol based hand sanitizers [ABHS] products marketed under the over-the-counter [OTC] monograph to ensure the safety of healthcare workers and consumers, but is concerned about the potential impacts to public health that could occur if ABHS products containing healthcare antiseptic active ingredients are reclassified in a final monograph without full review of available, appropriate science based data and risk models. The FDA is requested not to issue a final monograph regarding OTC healthcare antiseptic active ingredients that are used in ABHS products, until full and fair consideration is given to existing evidence that has been provided to FDA that supports general recognition of safety and effectiveness of OTC ABHS products, and to potential costs associated with the final monograph.

FDA Response:
On May 1, 2015, FDA published a proposed rule in which the Agency proposed to establish conditions under which OTC antiseptic products intended for use by health care professionals in a hospital setting or other health care situations outside the hospital are generally recognized as safe and effective (GRASE). Alcohol based hand sanitizers (ABHS) fall under the category of antiseptic rubs, which are sometimes referred to as "leave-on products" and are not rinsed off after use. OTC products being considered under the health care antiseptic proposed rule include health care personnel hand washes, health care personal hand rubs, surgical hand scrubs, surgical hand rubs, and patient preoperative skin preparations.

The health care antiseptic proposed rule is part of a series of rulemakings for a monograph for OTC topical antimicrobial drug products. FDA first published an advanced notice of proposed rulemaking for a monograph for OTC topical antimicrobial drug products in 1974. In 1978, FDA issued a proposed rule in the form of a tentative final monograph or TFM for certain antimicrobial products. In 1994, FDA issued a proposed rule amending the 1978 TFM for certain antimicrobial products, including antiseptic hand washes (i.e, consumer hand washes), health care personnel handwashes, patient preoperative skin preparations, and surgical hand scrubs.

In addition, there have been three meetings of the Nonprescription Drugs Advisory Committee (NDAC) and two public feedback meetings with regulated industry that are relevant to the

discussion of health care antiseptic safety and effectiveness. One of the feedback meetings was specific to study designs for completing data gaps for ABHS products.[116]

Before issuing a final rule on a GRASE determination for health care antiseptic active ingredients used in OTC ABHS products, FDA will fully consider all the available evidence, including the recommendations of the NDAC, public comments on the agency's notices of proposed rulemaking, and all new data and information on OTC health care antiseptic products that have been submitted to the rulemaking docket or have other been made publicly available. In addition, FDA will assess the economic implications and the costs and benefits of the final rule under Executive Orders 12866, 13563, the Regulatory Flexibility Act, and the Unfunded Mandates Reform Act of 1995.

3. Biosimilars

The Committee is concerned that FDA has failed to provide the public adequate opportunity to review and comment on regulatory standards for the approval and oversight of biosimilar drugs. Therefore, FDA is directed to provide the Committee with an estimated timeline by which the agency will: finalize all pending draft biosimilars guidance documents, publish draft biosimilar guidance documents included in its 2015 regulatory agenda, and finalize those draft guidance documents. The Committee expects to receive this report no later than 2 weeks after the Committee reports this legislation.

FDA Response:
FDA will provide the requested report.

4. Centers of Excellence in Regulatory Science and Innovation

The Committee is encouraged by the ongoing research and collaboration underway at the Centers of Excellence in Regulatory Science and Innovation program and commends the FDA for launching this program in 2011 and expanding it in 2014. As such, the Committee directs the Office of the Commissioner to use at least $2,000,000 within existing funds to provide additional funding opportunities for the existing CERSI Centers to allow for the capitalization of ongoing studies and research.

FDA Response:
FDA appreciates the recognition of the importance of the CERSIs, their contributions to regulatory science, and identification of support for them.

5. Comparative Oncology

The Committee recognizes the value in using data from cancers in companion animals to provide answers to important translational questions about cancer biology, diagnosis, and treatment. This research offers an important opportunity to study cancers in thousands of subjects to benefit both human patients and pets. The Committee requests FDA address the use of companion animals in diagnosis and treatment research and encourage the FDA to open grant opportunities in animal models to increase the study of the 1 million companion animals that naturally develop cancer each year.

FDA Response:
While FDA believes that a wealth of current information exists regarding companion animals with naturally occurring diseases that can be directly applies to drug approvals for both animal

[116] Available at: http://www.regulations.gov/#!documentDetail;D=FDA-2015-N-0101-1248

and human drugs without additional funding, FDA recognizes that additional research in oncology and studies in both companion animals and humans are needed to support future advancements in translational medicine. However, FDA believes that such efforts are more aligned with the National Cancer Institute's mission.

Currently information exists in companion animals with naturally occurring diseases that can be directly applied to drug development and review process for both humans and companion animals. This information can be utilized without additional funding by FDA. FDA recognizes that additional research in oncology and studies in both companion animals and humans are needed to support future advancements in translational medicine. However, these efforts are more aligned with the National Cancer Institute's mission.

6. Cord Blood Regulation

The Committee directs the FDA to undergo a review and seriously consider the potential need for revision of the current regulatory requirements for cord blood licensure, particularly those related to manufacturing and storage, to ensure the correct applicability to this industry since the current regulatory requirements being applied are the same ones that apply to pharmaceutical products. In addition, the Committee directs the FDA to create an advisory task force, comprised at a minimum of public and private cord blood bankers, transplanters and patients, to provide recommendations to the agency about the current licensing requirements and changes that may be necessary.

FDA Response:
FDA developed an innovative regulatory paradigm for minimally manipulated, unrelated allogeneic placental/umbilical cord blood (HPC, Cord Blood) through extensive outreach and collaboration with our stakeholders. This regulatory program has resulted in HPC, Cord Blood units that are manufactured more consistently without interfering with product availability.

The manufacturing and storage requirements, as well as other requirements, were developed in collaboration with our stakeholders through various means including:

- two meetings of the Cellular, Tissue, and Gene Therapy Advisory Committee
- development of the final guidance, ''Class II Special Controls Guidance Document: Cord Blood Processing System and Storage Container"
- two rounds of guidance development regarding recommendations for IND and Biologics License Application submissions for HPC, Cord Blood
- a cord blood licensure workshop; outreach to the Health Resources Services and Administration (HRSA)
- outreach to the National Marrow Donor Program (NMDP)
- outreach at professional meetings; more than 10 pre-BLA meetings with stakeholders and through participation as a liaison to the HHS Advisory Council on Blood Stem Cell Transplantation (ACBSCT).

The ACBSCT advises the Secretary of HHS and the Administrator of HRSA on the activities of the C.W. Bill Young Cell Transplantation Program and the National Cord Blood Inventory (NCBI) Program. Members of the ACBSCT include representatives of marrow donor centers, transplant centers, and cord blood banks, patient and patient family representatives, scientists, ethicists, and members of the general public.

In addition, FDA has met recently with the NMDP and representatives of licensed cord blood banks to discuss lessons learned and identify ways in which FDA and the industry may work

together to facilitate further development of HPC, Cord Blood products. Based on the input obtained, the manufacturing and storage requirements are considered appropriate for HPC, Cord Blood licensure, and FDA is committed to working with industry to improve best practices under the current regulations.

7. Cosmetics

The Committee provides not less than $11,700,000 for cosmetics activities, including not less than $7,200,000 for the Office of Colors and Cosmetics [OCAC]. Funding for OCAC is for the direct support of the operation, staffing, compliance, research and international activities performed by this office. The Committee notes that FDA's budget submission stated that FDA would meet a March 2015 deadline, set by this Committee, to respond to a citizen petition regarding trace amounts of lead in cosmetics. This has not occurred, and this unacceptable delay is indicative of longstanding issues with FDA's review of cosmetics. Since 1976, cosmetic ingredients have been reviewed by a private Cosmetic Ingredient Review program, established by the cosmetic industry, with nonvoting FDA participation. The Committee directs FDA to work with the industry to study the transfer of this program to a more formal public-private partnership, similar to the United States Pharmacopeia, if appropriate and beneficial for consumers, and to report back to the Committee on this effort.

FDA Response:
OCAC will use FY2016 funding for direct support of the operation, staffing, compliance, research, and international activities performed by this office. As noted in our response to the Committee last year, FDA sponsored and completed additional studies to address data gaps regarding trace amounts of lead in cosmetic products. FDA has evaluated data from these studies and other relevant information and has worked to respond fully to the citizen petition.

While FDA will prepare the requested report, the Committee's directive raises significant appearance concerns and resource issues that will be addressed in the report. The CIR is a private, industry-funded organization, and FDA believes that enhancing the authority and stature of a private organization is inappropriate for a Federal regulatory agency. In addition, charging a public-private partnership with determining the safety of cosmetic ingredients – an activity within the Agency's statutory purview – may create the appearance that the partnership's determinations represent formal FDA determinations.

8. Deeming Regulations

The Committee notes that the Family Smoking and Prevention and Tobacco Control Act, which became law in 2009, gave FDA immediate authority over certain tobacco products, and gave authority to the Secretary of Health and Human Services to deem other products subject to FDA regulation. On April 25, 2014, nearly 5 years after it had been granted the authority to do so, FDA issued those proposed deeming regulations, but has not yet finalized them. FDA is therefore directed to issue a final regulation addressing the deeming of other tobacco products under FDA's jurisdiction within 30 days and to act expediently to implement that regulation once finalized.

FDA Response:
Finalizing the tobacco deeming rule is of the highest priority for the Agency and the Administration. We share your sense of urgency on this important matter. FDA received over 135,000 comments to the docket and we are working diligently with the Administration to

finalize the rule as soon as possible. The rule has undergone extensive internal review within FDA and HHS, and is now under review at the Office of Management and Budget.

Once the proposed rule is finalized, some provisions – for example, establishment registration, product listing, ingredient listing, and the adulteration and misbranding provisions of the statute – in the Federal Food, Drug, and Cosmetic Act (FD&C Act) will automatically apply to all deemed tobacco products. In addition, other provisions of the proposed rule will apply to covered, newly deemed tobacco products such as:

- minimum age and identification restrictions to prevent sales to underage youth
- requirements to include health warnings
- a prohibition of vending machine sales, unless in a facility that never admits youth.

When the rule is final, FDA will prioritize implementation, including educating industry on how to comply with the requirements in the rule. In addition, FDA considers the deeming rule to be a foundational regulation, which, once finalized, will allow the Agency to take further actions regarding critical public health issues.

9. Duchenne Muscular Dystrophy

The Committee is aware that a patient-focused draft guidance for drug development on Duchenne Muscular Dystrophy was submitted to FDA in June 2014. The Committee supports this initiative and requests that FDA provide a detailed description of its plans to move forward with the development of a related guidance.

FDA Response:
FDA is committed to engaging with patient groups to receive their valuable input during the evaluation of the medical needs of patients with rare diseases whenever appropriate. We appreciate the guidance that members of the Duchenne muscular dystrophy (DMD) community submitted to FDA in June 2014. FDA announced the DMD community's guidance through a Federal Register notice (September 4, 2014) to seek additional guidance and public comment. FDA carefully considered the consortium's guidance and public comments received in response to it in writing the agency's own draft guidance.

The draft guidance for industry, "Duchenne Muscular Dystrophy and Related Dystrophinopathies: Developing Drugs for Treatment," was released in June 2015, and a 60-day comment period was provided. We are currently reviewing the comments received and plan to issue a final guidance in 2016. The purpose of the guidance to industry is to assist sponsors in the clinical development of drugs for treating X-linked Duchenne muscular dystrophy and related dystrophinopathies, and to serve as a focus for continued discussions on this topic.

10. Farm Regulations

The Committee remains concerned about how the FDA will determine whether and to what degree a farm or food business is subject to regulation. It is important that FDA is careful to apply new rules appropriately for the size of the operation in accordance with congressional intent.

FDA Response:
FDA appreciates that the produce safety rule establishes, for the first time, federal regulatory requirements for on-farm growing, harvesting, packing, and holding of produce. We also appreciate that implementing the requirements of this rule will come with a cost, both in time

and resources. As such, the Final Rule does not cover farms that have an average annual value of produce sold during the previous three-year period of $25,000 or less.

The Final Rule also contains provision(s) for a qualified exemption and corresponding modified requirements for farms that meet certain requirements – including having food sales averaging less than $500,000 per year during the previous 3 years and the farm's sales to qualified end-users –either consumers or restaurants and retail food establishments in the same state or Indian reservation or within 275 miles – exceed sales to others.

In addition, FDA has provided extended compliance periods based, in part, on the size of the farm. We conclude that these provisions adequately address the concerns of small farms and are in compliance with our statutory mandate under section 419 of the FD&C Act.

FDA will work with partners to provide technical assistance to the farming community, especially small and very small farms, regarding compliance with the produce safety rule. We are developing guidance documents, including general guidance on the implementation of the rule, as well as a Small Entity Compliance Guide (SECG) in accordance with section 105(b) of FSMA (21 U.S.C. 350h note) and section 212 of the Small Business Regulatory Enforcement Fairness Act (Pub. L. 104-121). A SECG is a guidance that explains the actions a small entity must take to comply with a rule. We also plan to work closely with State, Territorial, tribal and local partners to develop education and training programs for the same purpose.

With respect to food businesses – both on and off farms – that are required to register with FDA and thus are potentially subject to the Preventive Controls for Human Food rule or the Preventive Controls for Animal Food rule (PC rules), we have provided modified requirements for qualified facilities – for example, very small businesses as defined in the PC rules – that exempt them from having to develop a written food safety plan. In addition, modified supplier verification activities apply when the supplier to be verified is a qualified facility under the PC rules or a farm that is not covered by the produce safety rule or that is subject to a qualified exemption under that rule.

11. Foreign High Risk Inspections

As the importation of drugs, food, and medical devices from China continue to increase, the Committee is concerned about the FDA's ability to keep pace with the exporter universe and volume of exports. For fiscal year 2015, an additional $2,000,000 was provided for foreign drug safety to address the growing number of human drugs produced overseas and the increasing number of imported drug shipments in order to ensure the continued safety and quality of these products. These funds have been provided to support the agency's overseas inspections, work with industry and other stakeholders in safety in manufacturing, strengthen agency relationships with foreign regulators, and analyze trends and events that might affect the safety of FDA regulated products exported to the United States. The Committee is supportive of FDA as it moves toward a more, targeted, risk-based, and efficient inspection model that incorporates commercially available information on high-risk establishments. As with other Federal agencies, such as CMS, better data has helped to make sure a company exists and is in good standing prior to an inspection and to help prioritize FDA's investigations and triage safety inspections. Within the funds provided for the China Safety Initiative the Committee directs the FDA to maintain robust funding for onsite verification support and integration of results in FDA inspection planning.

FDA Response:
FDA recognizes the concerns indicated in the Committee statements regarding the ability to keep pace with the importation of drugs, food, and medical devices from China, the exporter universe, and volume of exports. Globalization has increased the volume of imported products into the United States, and the complexity of supply chains poses challenges for ensuring the safety of FDA regulated products. FDA continues to implement risk-based decision making for field operations, including the efforts of the Foreign Offices to ensure the most efficient use of budget and human resources in protecting the U.S. public.

FDA will continue to fund and develop methods that enhance the data available and the quality of such data in order to continue to enhance a more targeted, risk-based and efficient system to oversee the safety of FDA regulated products.

FDA agrees that performing site verification is an important activity, given that it improves accuracy and completeness of firm manufacturing site data. That firm data leads to enhanced efficiencies when planning domestic and foreign firm inspections, and aids in proper identification of manufacturing firms. It also contributes to the FDA's ability to react swiftly to national emergencies involving food, drug and medical device supply chain problems, which ultimately improves the safety of the nation's food, drug, and medical device supply.

To that end, Dun & Bradstreet was contracted in FY 2014 for site verification services in China.

12. In Silico Clinical Trials

In Silico clinical trials use computer models and simulations to develop and assess devices and drugs, including their potential risk to the public, before being tested in live clinical trials. Advanced computer modeling may also prove useful in helping to predict how a drug or device will behave when deployed in the general population or when used in particular circumstances, thereby helping to protect the public from the unintended consequences of side effects and drug interactions. In Silico trials may potentially protect public health, advance personalized treatment, and be executed quickly and for a fraction of the cost of a full scale live trial. The FDA has advocated the use of such systems as an additional innovative research tool. Therefore, the Committee urges FDA to engage with device and drug sponsors to explore greater use, where appropriate, of In Silico trials for advancing new devices and drug therapy applications.

FDA Response:
FDA acknowledges the benefits to public health provided by in silico clinical trials, and has previously advocated for their use as one of many research tools. Modeling and simulation play a critical role in organizing diverse data sets and exploring alternate study design strategies, so that safe and effective new therapeutics can advance more efficiently, from preclinical studies through clinical trials to market. The efforts in modeling and simulation are enabled through multiple collaborations with external parties that provide additional expertize and infrastructure to advance the development of innovative state-of-the-art technologies.

FDA advises sponsors on the use of modeling and simulation to predict clinical outcomes, inform clinical trial designs, support evidence of effectiveness, optimize dosing, predict product safety, and evaluate potential adverse event mechanisms. Some computational models are firmly embedded in the product review process and supported by guidances, while others are used as needed (fit-for-purpose) or in a research capacity to help inform regulatory decisions.

FDA is also collaborating, both internally and externally (with both Investigational New Drug applications sponsors and New Drug Application stakeholders, researchers, and other regulatory

bodies), to maximize the use of modeling and simulation to complement clinical trials or to improve their design and success, including – but not limited to – comparative predictions of Phase 3 responses across a novel therapeutic class and replacement of clinical studies with in silico modeling for cardiac safety testing.

In addition FDA is actively working to explore modeling approaches and enhance their regulatory impact through the Agency's Scientific Computing Board whose goal is to advance science, streamline operations, and strengthen FDA's overall effectiveness. FDA drug modeling reviewers have also actively engaged with device modeling efforts to build regulatory models for product design and evaluation, including the development of a digital library of models and a family of "virtual patients" for device testing.

13. In Vitro Clinical Trials

In Vitro clinical trials use specimens collected from patients to test how a particular cancer or disease will react to a specific therapy or combination of therapies. This personalized approach to treatment can improve a patient's quality of life by increasing the likelihood that physicians and researchers will find the proper combination of drugs uniquely suited to treat that individual's illness. An emerging new scientific methodology, In Vitro trials allow researchers to test therapeutics and treatment strategies on living human tissues without the risks posed by traditional whole patient clinical trials. Personalized treatment through In Vitro trials dismantles the ''one size fits all'' approach to care and enables medical professionals to diagnose and treat patients in a more efficient and effective way. While the Committee recognizes that In Vitro tests may not always predict clinical responses, it urges the FDA to continue to engage with drug sponsors to explore greater use, where appropriate, of In Vitro clinical trials for drug development programs under Investigational New Drug applications and general therapeutic indications, especially as it relates to complicated cancers and other common disease states.

FDA Response:
FDA acknowledges the benefits to public health provided by in vitro trials, and the potential to provide more personalized medical treatment options for patients. FDA recently launched the Critical Path Innovation Meeting program, which allows drug developers and other stakeholders to discuss new and emerging technologies with FDA. These meetings have included topics related to In Vitro trials to identify suitable combination therapies to take into clinical trials. FDA will continue to engage stakeholders through this mechanism to discuss such technologies. Where appropriate, companies may still discuss specific drug development proposals involving these technologies in the setting of FDA's formal meetings with industry under the Investigational New Drug application.

In addition, consortia and other stakeholders may interact with FDA via the Drug Development Tools Qualification Program to the extent that a particular technology platform is being formally developed to support regulatory decision-making. FDA has received submissions involving In Vitro trials, and will continue to engage with sponsors of drug development tools to advance In Vitro trials into drug development.

14. Mammography Quality Standards Act

The Committee recommendation includes full funding as requested for implementation of the Mammography Quality Standards Act. This program sets national quality standards for mammography facilities, equipment, personnel, and operating procedures, and has improved the quality of mammography and made mammograms a more reliable tool to detect breast cancers.

FDA Response:
FDA intends to fully fund the MQSA program.

15. Mammography Reports

The Food and Drug Administration is directed to revise its regulations regarding the summary mammography reports in lay language provided to patients to require the inclusion of information on the patient's breast tissue density; an explanation that dense tissue may mask the presence of breast cancer on mammograms; and advice that patients speak with their healthcare provider about whether they would benefit from additional tests, and about any other questions they may have. The FDA should also revise its regulations regarding the medical report provided to healthcare providers to require the inclusion of information on the patient's breast density and the masking effect such tissue may have on detecting breast cancer.

FDA Response:
FDA is working on proposed amendments intended to address the addition of breast density information to the content of reports required by the MQSA implementing regulations.

16. Medical Gases

The Committee is concerned that FDA has not initiated rulemaking to address numerous longstanding regulatory issues for medical gases despite the statutory requirement in FDASIA to issue a final rulemaking addressing all necessary changes for medical gases by July 9, 2016. Designated medical gases are a unique class of drugs that differ significantly from traditional pharmaceuticals and therefore must be addressed in the Federal drug regulations to prevent safety and enforcement issues caused by current regulations. The Committee disagrees with the FDA report to Congress sent on June 30, 2015 that despite decades of issues created by existing regulations ''the current regulatory framework is adequate and sufficiently flexible to appropriately regulate medical gases.''

FDA Response:
As required in FDASIA, FDA reviewed Federal drug regulations that apply to medical gases, and submitted the June 2015 Report to Congress. FDA sought public comments through meetings and a public docket.

As described in that report, FDA has determined that the current regulatory framework is adequate and flexible enough to appropriately regulate medical gases with regard to most issues. FDA can work within the existing regulatory to regulate the production and distribution of medical gases without rulemaking, through, for example, publication of revised guidance to industry and revisions to FDA's medical gas inspection program and related inspection training. FDA disagrees that these tools are inadequate to appropriately regulate medical gases, and specifically disagrees that the existing regulations have led to any significant safety issues in the provision of medical gases.

FDA is currently engaged in a number of activities intended to reduce regulatory uncertainty and clarify expectations for industry and other stakeholders including additional training of inspectors, implementing an updated inspection program, and updating the 2003 draft guidance for industry on current good manufacturing practices (CGMPs) for medical gases. In December 2015 FDA staff met with representatives of the medical gas industry regarding their views on the revision of the 2003 draft guidance on CGMPs.

As we stated in FDA's Report to Congress on the regulation review, FDA will continue to evaluate the need for regulatory changes on an ongoing basis. FDA expects to maintain open

communication with industry, members of Congress, and other stakeholders as appropriate, and we will continue to evaluate and address medical gas issues as needed.

The statutory deadline set in FDASIA to finalize any regulation changes that FDA has determined are necessary is July 9, 2016 (see FDASIA section 1112(b)). FDA will endeavor to meet that date for any such regulations.

17. Nanotechnology

The Committee recognizes the increased capabilities that FDA has developed to study environment, health, and safety of nanomaterials within FDA's Jefferson Laboratory Campus, including the National Center for Toxicological Research, and its consolidated headquarters at White Oak, Maryland. The Committee expects FDA to continue to support collaborative research with universities and industry on the toxicology of nanotechnology products and processes in accordance with the National Nanotechnology Initiative Environment, Health, and Safety Research Strategy as updated in October 2011.

FDA Response:
FDA has increased the capabilities to understand the health impact and safety of nanomaterials through increased training for FDA staff (lecture series, seminars, workgroups), increased research into the safety and disposition of nanomaterials in various products, increased collaboration with national and international agencies, and continued development of capabilities at the FDA's Jefferson Laboratory Campus in Arkansas and its consolidated headquarters at White Oak, Maryland.

The Collaborative Opportunities for Research Excellence in Science (CORES) Program is part of FDA's Nanotechnology Regulatory Science Research Plan and has funded 24 research projects since 2011. These projects align with the National Nanotechnology Initiative (NNI) Environment, Health, and Safety Research Strategy as well as the activities listed in Section 1126 of the Food and Drug Administration Safety and Innovation Act (Public Law 112–144).

To date, these projects have increased FDA knowledge on nanotechnology and provided essential baseline information that led to the development of regulatory science tools, including toxicity assays, assessment methodologies, and test protocols FDA uses to evaluate nanotechnology in FDA-regulated products.

Through these projects, FDA staff developed working knowledge of nanotechnology which they shared with FDA scientists and the scientific community through peer-reviewed journal articles and presentations at national and international scientific conferences. These projects increased collaboration across FDA and strengthened the agency's relationship with academia and across the U.S. government. The research findings from these projects proved vital in drafting regulatory guidance to industry and in providing sound and scientifically based responses to inquiries from stakeholders.

The continued development of the core-facilities at the Jefferson Laboratories and White Oak campuses have provided scientists at the FDA and other NNI agencies the appropriate tools to accurately detect and quantify nanomaterials in their research projects. Core-facility and other FDA scientists are participating in international efforts to develop standards and standard methodologies in support of regulatory science research and national and international development of regulatory guidance on nanotechnology-enabled products.

Together, the CORES program, development of core-facilities at Jefferson Laboratories and White Oak campuses, regulatory science-focused research projects within FDA, and training

through multiple modalities, has enhanced FDA's ability to understand and regulate nanotechnology-based products. FDA will continue to support collaborative research with universities and industry on the toxicology of nanotechnology products and processes in accordance with the National Nanotechnology Initiative Environment, Health, and Safety Research Strategy.

18. National Antimicrobial Resistance Monitoring System

The Committee recommendation includes $10,800,000 for the National Antimicrobial Resistance Monitoring System, equal to the level provided in fiscal year 2015.

FDA Response:
FDA will provide funding equal to FY 2015 levels as recommended by the Committee.

19. Nutrition Facts Label

The Committee is concerned that the FDA has not published in the Federal Register the results of FDA's ''Experimental Study on Consumer Responses to Nutrition Facts Labels with Various Footnote Formats and Declaration of Amount of Added Sugars'' (78 FR 32394, May 30, 2013). The purpose of the study, as described by the Agency, is ''to examine how consumers would comprehend and use this new information''. Given that sound science, peer review and transparency are essential to effective protection of public health, the Committee encourages the FDA to release this study for public review and comment prior to finalizing changes to the Nutrition Facts label.

FDA Response:
FDA provided the public the results of the "Experimental Study on Consumer Responses to the Nutrition Facts Labels with Declaration of Amount of Added Sugars" and the "Experimental Study on Consumer Responses to Nutrition Facts Labels with Various Footnote Formats" in the Federal Register of July 27, 2015 (80 FR 44303).

20. Opioid Overdose Prevention

The Committee notes that on June15, 2015, the CDC issued a report on ''Opioid Overdose Prevention Programs Providing Naloxone to Laypersons'', in which the CDC noted the benefits of expanding access to the life-saving drug naloxone, which reverses the effects of an opioid overdose. The Committee urges FDA to promote the development and widespread usage of naloxone products. The agency's efforts should include working closely with product sponsors interested in marketing naloxone for use without a prescription to expedite review and decision making.

FDA Response:
FDA continues to work to encourage the development of additional ways to administer naloxone and is supportive of appropriately broadening the use of naloxone, including discussions of over-the-counter (OTC) status and of studies that would appropriately assess its wider availability under appropriate circumstances. A little over three years ago, FDA partnered with other HHS agencies and laid out the pathway for the development and marketing of naloxone.

Naloxone has been a part of ONDCP's National Drug Control Strategy since 2012 and is a priority area in the recently announced initiative of the Secretary to address the complex problem of prescription opioid and heroin abuse. The Secretary's initiative emphasizes implementation strategies which include not only naloxone availability, such as Narcan nasal spray, the first FDA approved nasal naloxone product designed for administration by family members and caregivers

approved in November 2015, but better prescription practices and deployment of medication assisted treatment to treat opioid-use disorders. FDA has led two meetings with other HHS agencies that have explored the various issues around naloxone provision, including pharmacy availability, co-prescribing, use on ambulances and by other first responders, and over-the-counter status.

The availability of naloxone without a prescription would allow patients to obtain naloxone without contacting a physician for a prescription to bring to a pharmacy. If substantial data exist to support that consumers can appropriately select and safely use naloxone in an OTC setting without the assistance or training from a healthcare professional, the FDA encourages submission of these data to the Agency for review. Any application for OTC marketing of naloxone would be expected to meet FDA's criteria for priority review, which will help to expedite FDA's review of the data and a decision on the application.

FDA will continue to work to reduce the risks of opioid abuse and misuse, but we cannot solve this complex problem alone. A comprehensive and coordinated approach is needed; one that includes federal, state and local governments, public health experts, health care professionals, addiction experts, researchers, industry, and patient organizations.

21. Oversight Activities

The Committee notes that over the past 5 years FDA's responsibilities and resources have grown significantly. The Committee is concerned that oversight of FDA has not kept pace with the growth in the agency's regulatory authority or funding. Therefore, the Committee recommendation includes $1,500,000 for the HHS Office of Inspector General specifically for oversight of FDA activities. The funding provided under this appropriation is in addition to FDA oversight activities supported within the Inspector General's regular appropriation. The Committee instructs the Inspector General to submit a plan, within 60 days of the enactment of this act, on the additional oversight activities planned with this funding.

FDA Response:
HHS Office of Inspector General will provide the requested report.

22. Pediatric Device Consortia Grants

The Committee is pleased that the nine FDA-funded Pediatric Device Consortia have assisted in the development of more than 450 proposed pediatric medical devices since its inception in 2009, as well as promoting job-growth in the healthcare sector, and as such, continues to support this critical effort. The program funds consortia to assist innovators in developing medical and surgical devices designed for the unique needs of children that often go unmet by devices currently available on the market. The Committee directs FDA to fund this program at the highest possible level within available resources, and at no less than the level funded in the previous year.

FDA Response:
Since the program's inception in 2009, the pediatric device consortia have advised innovators on more than 620 potential pediatric devices – and assisted on more than 179 projects this past year. As a result of funding advice provided by the consortia, more than $ 90 million of additional funds have been raised to advance pediatric device projects affiliated with the consortia. Seven PDC-assisted pediatric medical devices are now being used in pediatric care, including Buzzy for relief of pain with needlesticks, Rhinoguard for assist in naso-tracheal intubation, and the Hypothermic Control Device head wrap for infants recovering from

hypothermia. Thus, the FDA intends to fund the Pediatric Device Consortia Grant Program at similar level as last year, with no less than $ 3 million dollars towards the program.

23. Repackaging for Long Term Care Pharmacies

In February the Food and Drug Administration released a draft guidance entitled, "Repackaging of Certain Human Drug Products by Pharmacies and Outsourcing Facilities." The Committee is concerned that in issuing the draft guidance the agency failed to consider the unique nature of long term care pharmacies and the populations they serve. Before issuing a final guidance the Committee urges the agency to consider its implications on patient access to safe and effective medications from long term care pharmacies.

FDA Response:
FDA received 625 comments on the draft guidance, "Repackaging of Certain Human Drug Products by Pharmacies and Outsourcing Facilities," mostly concerning long term care pharmacies and the facilities they serve. FDA also held a listening session in August 2015 with representatives of long term care facilities and the pharmacies that serve them to hear their views on FDA's proposed policies. FDA will consider all of the issues raised in the comments and input received during the listening session before finalizing the draft guidance.

24. Seafood Advisory

The Committee remains concerned that despite numerous commitments over many years, FDA has not published final advice on seafood consumption for pregnant women, mothers, and children. The Committee is pleased that FDA released draft advice in June 2014, however, pregnant women and healthcare providers still await clear, actionable and science-based final seafood advice. Based on the recommendation of the Dietary Guidelines Advisory Committee, the final FDA seafood advice shall re-evaluate the draft limit on albacore tuna to ensure it is consistent with the FDA net effects report and the Joint United Nations Food and Agriculture Organization/World Health Organization Expert Consultation on the Risks and Benefits of Fish Consumption, 2010. The Committee directs FDA to publish final advice to pregnant women on seafood consumption in conjunction with all applicable parties. Finally, FDA shall provide a progress report to the Committee 30 days after the enactment of this act and every 30 days thereafter until the final seafood advice is published.

FDA Response:
On June 10, 2014, FDA and EPA jointly issued a draft update to the seafood advice they last issued in 2004. The updated joint advice tracks the current recommendation in the Dietary Guidelines for Americans, issued by the Departments of Agriculture and Health and Human Services, in that it advises pregnant women, women who may become pregnant, and nursing women eat at least 8 and up to 12 ounces per week of a variety of fish lower in mercury in order to optimize the developmental benefits that fish could provide.

The two agencies announced that there would be at least one public meeting on the advice, to be held by the FDA Risk Communication Advisory Committee. For that reason, the public comment period, which opened on June 11, 2014, was indefinite until that meeting, and any other meeting, could be held. Specifically, FDA and EPA announced that the comment period would be open until 30 days after the last transcript from the advisory meeting and any other meetings that the agencies would hold on this subject became available.

The Risk Communication Advisory Committee met on the fish consumer advice on November 3-4, 2014 and the transcript from that meeting was subsequently made available. Since no other

public meetings are planned, FDA and EPA closed the comment period by publishing a notice in the Federal Register on February 24, 2015. The agencies have subsequently studied the public comments, made modifications to the advice where appropriate, and expect to publish the updated advice in 2016.

25. Seafood Economic Integrity

The Committee recognizes the importance of seafood to a healthy diet, but is concerned that the FDA does not focus sufficient attention on economic integrity issues, particularly with respect to mislabeling of species, weights, and treatment. The Committee encourages the FDA to work with States and the Department of Commerce to more aggressively combat fraud in parts of the seafood industry.

FDA Response:
FDA continues to invest in significant technical improvements to enhance our ability to identify seafood species using DNA sequencing. DNA sequencing capabilities greatly improve the Agency's ability to identify misbranded seafood products in interstate commerce. FDA is preparing to expand its DNA capabilities by releasing new test methodologies for detecting crustacean DNA, allowing for species substitution analysis of shrimp, crab and lobster.

FDA works toward implementing better-targeted and more efficient sampling strategies to identify seafood misbranding and adulteration and is currently conducting an evaluation of retail seafood counter substitution with the assistance of multiple states and their respective inspection agencies. FDA is currently a part of the new Presidential Task Force established to combat IUU Fishing and Seafood Fraud; and as such works closely with several agencies such as DOC-NOAA and DHS-CBP to help better target fraudulent activities.

26. Sodium

The Committee is concerned about FDA's continued focus on voluntary sodium reductions and the Institute of Medicine's [IOM] 2010 recommendation to modify the Generally Recognized as Safe [GRAS] status of sodium, particularly given the ongoing scientific discussion regarding appropriate sodium intake to maintain positive health. The IOM published a more recent study in 2013, which concluded additional research may provide further information with respect to the health effects of sodium intake on general and sub populations. The Committee recommends that a panel be convened, at the IOM or another leading Federal institution, which includes a representative array of research perspectives, including those who have raised concerns on the safety of low-sodium diets. The Committee does not believe any sodium reduction activities should be finalized until the disagreement between the impact of lower sodium on blood pressure (and an extrapolation to health) and direct research suggesting a negative impact of very low-sodium intakes is resolved.

FDA Response:
Americans are consuming excess sodium, which contributes to increased risk of hypertension, a primary contributor to stroke and heart disease. FDA and its federal partners have been focusing on voluntary reductions to move from a current sodium intake of about 3,400 milligrams (mg) in the U.S. to a value closer to 2,300 mg per day. About 75 percent of sodium in the diet is estimated to be added during the manufacturing of foods and preparation of restaurant foods, making it difficult for consumers to reduce their sodium intake (Anderson et al., 2010; Mattes and Donnelly, 1991). Encouraging industry to reduce sodium in products so consumers have

more options does not require bringing consumers into an excessively low sodium intake range. U.S. government efforts are not focused on reducing sodium to below 2,300 mg per day.

The 2013 IOM report entitled *Sodium Intake in Populations: Assessment of Evidence* reaffirmed that sodium intake levels are too high and should be reduced to 2,300 mg per day. This recommendation is also supported by the Scientific Report of the 2015 Dietary Guidelines Advisory Committee (DGAC), which thoroughly considered the 2013 IOM Sodium Report and other evidence in their review, and also the 2015-2020 Dietary Guidelines for Americans.

FDA is aware of recent observational studies (Stolarz-Skrzypek et al., 2011, O'Donnell et al., 2011; O'Donnell et al., 2014; Graudal et al., 2014) that are inconsistent with the large body of evidence that consistently shows a dose-response relationship between sodium intake and blood pressure (Aburto et al., 2013; Sacks et al., 2001; He et al., 2013, Mozaffarian et al., 2014; Eckel et al., 2014).

Results of these recent observational studies suggest low- and high-sodium intakes are associated with cardiovascular disease (CVD) events or deaths, and are inconsistent with other observational studies showing lower-sodium intake is associated with lower risk of CVD (Cook et al., 2014; Poggio et al., 2015).

Like other studies reviewed by IOM in 2013 and an American Heart Association Scientific Advisory Committee in 2014 (Cobb et al., 2014), these studies have major limitations in the selection of participants and/or measurement of sodium intake. Expert review of these studies by FDA and the Centers for Disease Control and Prevention indicate that these recent observational studies do not shift the weight of evidence.

High blood pressure is a leading risk factor for heart disease and stroke (Stamler et al., 1993; Kannel et al., 1996; van den Hoogen et al., 2000; O'Donnell et al., 1997, Prospective Studies Collaboration, 2002). Reducing average sodium intake in the U.S. population can reduce blood pressure and save tens of thousands of deaths and billions of health care dollars each year (Coxson et al., 2013; Bibbins and Domingo, 2010; Huang et al., 2014a).

27. Sunscreen

The Committee is aware that in July 2014, the U.S. Surgeon General issued A Call to Action to Prevent Skin Cancer, concluding nearly 5 million people are treated annually for all skin cancers combined, with an estimated cost of $8,100,000,000 per year. As a result, the Surgeon General called on the Federal Government to work with stakeholders to support skin cancer prevention. The Committee is pleased with the bipartisan reforms enacted in the Sunscreen Innovation Act [SIA] in 2014 to improve the process by which the FDA reviews sunscreen ingredients; however, the Committee is concerned that while skin cancer rates in the United States continue to climb, no new sunscreen ingredients have been generally recognized as safe and effective [GRASE] by the FDA since passage of the SIA. The Committee directs the FDA to provide a report that contains a detailed analysis of how FDA is balancing the Surgeon General's Call to Action, the known public health benefits that regular sunscreen use provides to prevent skin cancer and melanoma, and the long history of safe and effective use of sunscreens in comparable countries versus the hypothetical risk sunscreens posed to human health in FDA's generally recognized as safe and effective [GRASE] standard. Immediate action on sunscreen applications should be a priority. In addition, the Committee directs the FDA to work with stakeholders to ensure consumers in the United States have access to all sunscreen products that have been shown to be safe and effective; and therefore, requests that FDA, in finalizing the sunscreen

monograph consistent with the SIA, include provisions related to the maximum Sun Protection Factor [SPF] and to address spray dosage forms for sunscreens.

FDA Response:
The Sunscreen Innovation Act (SIA) imposes on FDA strict deadlines for making determinations about the generally recognized safe and effective (GRAS/E) status of these ingredients. It does not relax the scientific standards for evaluating safety and effectiveness or the requirement for sponsors to provide adequate data on which to base a GRAS/E determination.

A large increase in the amount and frequency of sunscreen usage, together with advances in scientific understanding and safety evaluation methods, has given rise to new questions about what information is necessary and available to support general recognition of safety and effectiveness of nonprescription sunscreen active ingredients. In particular, certain potential risks from long-term, regular exposure to sunscreen active ingredients cannot be detected or evaluated on the basis of commercial marketing experience.

FDA's expectations for safety and effectiveness data for nonprescription sunscreen active ingredients which are being considered through the SIA process are set to ensure consumers have access to sunscreens that are safe and effective, and are consistent with modern scientific thinking concerning safety and effectiveness of sunscreens.

As per the timelines in the SIA, FDA has completed reviews for all pending Time and Extent Applications for review of nonprescription sunscreen active ingredients and has tentatively determined that the pending sunscreen active ingredients are not GRAS/E for use in OTC sunscreens because the data are insufficient. FDA described certain data the Agency needs to determine that a nonprescription sunscreen active ingredient is GRAS/E and not misbranded in the proposed sunscreen orders it has issued under the SIA for each of the pending requests regarding nonprescription sunscreen active ingredients. The data described are in line with the safety data FDA is currently seeking for other topical nonprescription active ingredients under the OTC drug monograph system and for both topical prescription and nonprescription drugs seeking approval under the new drug application (NDA) process.

In addition, FDA has held public meetings with sponsors of pending requests for nonprescription sunscreen active ingredients to discuss data requirements and has issued draft guidance, as required by the SIA, to further delineate safety and effectiveness data needed to make a GRAS/E determination for a nonprescription sunscreen active ingredient. No data have been received, and there are no timelines imposed by the SIA for industry to submit this data. FDA looks forward to receiving and reviewing necessary industry data on which to base a (GRAS/E) determination.

FDA is committed to doing its part to provide American consumers with additional options for safe and effective nonprescription sunscreen active ingredients. However, FDA relies on industry to submit the data needed for review in order to support a GRAS/E determination. Americans deserve sunscreen products that are shown to be safe and effective. FDA has proposed data requirements that will allow us to determine that active sunscreen ingredients are generally recognized as safe and effective for use in nonprescription sunscreens. These data requirements were unanimously supported by a panel of scientific experts at a September 2014 public Advisory Committee meeting on sunscreens.

28. Vibrio

The Committee is aware of the public health challenge related to the naturally occurring bacteria called Vibrio parahaemolyticus (V.p.) that can accumulate in shellfish and believes that more scientific research is necessary to developing proper controls that will reduce the risk to consumers and sustain a healthy domestic shellfish industry. The Committee encourages the Food and Drug Administration [FDA] to increase funding for research into Vibrio illnesses associated with the consumption of raw molluscan shellfish, improve risk assessment models, and develop improved rapid detection methods for virulent Vibrio strains.

FDA Response:
FDA is aware of, and actively engaged in activities aimed at reducing, the risk that *Vibrio parahaemolyticus* (*V.p.*) poses to consumers of raw oysters and clams. Through participation in the Interstate Shellfish Sanitation Conference (ISSC), the FDA has been able to, over time, incorporate increasingly stringent time and temperature controls within the National Shellfish Sanitation Program (NSSP) Model Ordinance, which sets the standards and controls for implementation by state health authorities and the shellfish industry for controlling the safety of raw molluscan shellfish safety, including *V.p*.

By reducing time from harvest to temperature control and then the time from temperature control to an internal product temperature of 50°F, the post-harvest growth of *V.p*. can be limited, resulting in reduced risk in the final product. However, the cost of time/temperature control can be a significant challenge to the industry. To help develop the most effective time/temperature controls, FDA continues to participate in a number of collaborative efforts with state health authorities and the shellfish industry.

Each year FDA awards a grant to the ISSC. The grant serves to ensure that, in the U.S., the safety net for molluscan shellfish is consistently and uniformly managed at the state and industry level with administrative oversight from FDA. The grant also supports ongoing ISSC efforts to examine the science of *V.p.* and develop control measures aimed at reducing the risk of *V.p*. This is done through a collaborative effort among federal, state and industry partners to establish *V.p.* control standards in the NSSP Model Ordinance.

Recognizing the need for ongoing research to define effective and reasonable industry practices for controlling *V.p.*, FDA has awarded additional funding to the ISSC to support independent studies conducted by state shellfish authorities. The first round of funding, awarded in 2014, is supporting studies by three states (WA, NJ, CT) aimed at defining science-based industry practices to reduce the risk of *V.p.* in raw molluscan shellfish. Completion of those studies is expected in 2016. In further support of this effort, FDA again awarded funding to the ISSC in 2015 to support continued research intended to enhance our understanding of *V.p.* and how current and innovative industry practices impact and may reduce risk.

FDA works directly with the ISSC *Vibrio* Management Committee and the CDC to examine the incidence of *V.p.* illness and to engage the ISSC to adopt improved controls into the NSSP.

FDA works directly with state shellfish industry members to develop and implement shipboard controls to reduce risk through rapid onboard cooling techniques. Through this effort, FDA has seen a number of industry members implement controls that exceed those currently established in the NSSP and which have achieved significant additional illness reduction.

FDA has established a Workgroup on Ecological Forecasting for *Vibrio*. The goal for establishing the workgroup is to coordinate, plan, prioritize, and communicate ecological

forecasting activities related to *Vibrio* within and beyond FDA. Specifically, FDA is collaborating with NOAA under their Ecological Forecasting Roadmap to develop experimental *Vibrio* forecast products (among others) using FDA's risk models and NOAA's environmental data and hydrodynamic models. It is anticipated that the FDA-NOAA collaboration, with the engagement of other key federal, state, industry, and academic partners, will result in enhanced and regionally-specific forecasting tools for *Vibrio* risk assessments.

FDA continues to offer a program to extend research and technical assistance on *Vibrio* to states and industry through the *Vibrio* Assessment Review Board (VARB). States and industry can submit to FDA's VARB requests for research and technical assistance aimed at improving the science and control of *Vibrio* in molluscan shellfish. Through the VARB, FDA offers, as resources allow, assistance such as laboratory support, technical expertise, and statistical application to aid states and industry as they undertake independent *Vibrio* projects.

JOINT EXPLANATORY STATEMENT

1. FSMA Reporting

Given the complexity of FSMA implementation, the agreement directs the FDA to provide quarterly reports to the Committees with a breakdown on how funding has been allocated, as well as projections for future needs. The agreement also directs the FDA to provide a detailed accounting of its food safety resources in the fiscal year 2017 budget request, including which pre-2011 base resources are now repurposed for activities in support of FSMA and which resources are the result of appropriated increases from fiscal years 2011 to 2016, a detailed explanation of what the FDA has accomplished with increased food safety resources since fiscal year 2011, and how the aggregate total of these base resources for food safety will be utilized in fiscal year 2017.

FDA Response:
FDA will provide the requested report.

2. Biosimilars

The agreement acknowledges some progress in FDA's effort to address issues with products that are biosimilar to and interchangeable with FDA-licensed biological drug products. In August of this year, the FDA issued draft guidance and a proposed rule regarding naming of these products. However, the agreement remains concerned that FDA needs to provide the public with a greater opportunity to review and comment on regulatory standards for the approval and oversight of biosimilar drugs. Therefore, FDA is directed to provide the Committees with an estimated timeline by which the agency will finalize all pending draft biosimilars guidance documents and regulations. The Committees expect to receive this report no later than 60 days after enactment.

FDA Response:
FDA will provide the requested report.

3. Drug Shortages

There continue to be shortages of critical drugs following the enactment of the Food and Drug Safety and Innovation Act, including national shortages of drugs to test for and treat tuberculosis (TB). The Commissioner is directed to continue to prioritize the public reporting of manufacturing shortages, and to work with industry to prevent conditions that might lead to drug shortages. Additionally, the Commissioner is directed to report on the work of the FDA's intra-agency Drug Shortages Task Force, including how it works with other government agencies and outside stakeholders to address drug shortages. The report should specify what activities the Task Force has undertaken to prevent drug shortages affecting pediatric patients, including working with outside experts on this issue. The Commissioner is further directed to report on steps the FDA can take to prevent TB drug shortages and help maintain an adequate supply.

FDA Response:
FDA will provide the requested report.

4. Partially Hydrogenated Oils

The agreement provides bill language pertaining to the use of partially hydrogenated oils (PHO) in food products. The language declares that foods with PHOs are neither unsafe nor adulterated during FDA' s three year compliance period and provides businesses legal protection while they phase out the use of PHOs. Simultaneously, FDA is encouraged to provide a timely review of

the Food Additive Petition which addresses minor uses of PHOs for certain baking and processing needs.

FDA Response:
On October 1, 2015, FDA filed a food additive petition submitted by the Grocery Manufacturers Association requesting approval for the use of PHOs in various food applications. FDA is reviewing this petition and intends to complete its scientific safety review in a timely manner. In order for FDA to grant the petition, the petition must establish that the proposed use of the additive is safe, meaning that there is a reasonable certainty that no harm will result under the conditions of use.

5. E-cigarette research

The agreement provides $1,000,000 for the Center for Tobacco Products to enter into a contract with the Institute of Medicine to conduct an in-depth evaluation of available evidence of health effects from e-cigarettes and recommendations for future federally funded research.

FDA Response:
FDA recognizes that the tobacco marketplace is changing rapidly, with new types and brands of tobacco products increasing at a faster pace than ever before. The resulting prospect of consumers exploring and adopting use of new products is prompting tobacco control experts, scientists, and regulators to consider how to best evaluate, monitor, regulate, and communicate to the public about these products in order to protect the public health.

CTP has identified e-cigarettes as an immediate research priority area, and has funded over 50 research projects since 2012 to better understand e-cigarette initiation, use, perceptions, dependence, and toxicity. Research projects to address e-cigarette knowledge gaps is being funded by CTP via grants and contracts administered through the National Institutes of Health and through collaborative research with the Centers for Disease Control and Prevention.

This ongoing funded research will provide characterization of some e-cigarette devices, e-liquids, and aerosols, and a better understanding of e-cigarette users, reasons for use, abuse liability, use perceptions, health effects, and topography. CTP will contract with the Institute of Medicine (IOM) to conduct an in-depth evaluation of available evidence of health effects from e-cigarettes and recommendations for future federally funded research.

6. Seafood guidance

The agreement directs that the FDA ensure that pregnant women receive final guidance on nutrition advice for what seafood is safe and healthy to consume that is consistent, understandable, and based on the FDA's latest scientific review of the net effects of seafood consumption.

FDA Response:
On June 10, 2014, FDA and EPA jointly issued a draft update to the seafood advice they last issued in 2004. The updated joint advice tracks the current recommendation in the Dietary Guidelines for Americans, issued by the Departments of Agriculture and Health and Human Services, in that it advises pregnant women, women who may become pregnant, and nursing women eat at least 8 and up to 12 ounces per week of a variety of fish lower in mercury in order to optimize the developmental benefits that fish could provide.

The two agencies announced that there would be at least one public meeting on the advice, to be held by the FDA Risk Communication Advisory Committee. For that reason, the public

comment period, which opened on June 11, 2014, was indefinite until that meeting, and any other meeting, could be held. Specifically, FDA and EPA announced that the comment period would be open until 30 days after the last transcript from the advisory meeting and any other meetings that the agencies would hold on this subject became available.

The Risk Communication Advisory Committee met on the fish consumer advice on November 3-4, 2014 and the transcript from that meeting was subsequently made available. Since no other public meetings are planned, FDA and EPA closed the comment period by publishing a notice in the Federal Register on February 24, 2015. The agencies have subsequently studied the public comments, made modifications to the advice where appropriate, and expect to publish the updated advice in 2016.

7. Essure

The agreement is concerned about the safety issues raised at the Obstetrics and Gynecology Devices Panel of the Medical Devices Advisory Committee meeting on September 24, 2015, and directs the FDA to issue recommendations on how to address these concerns by March 1, 2016.

FDA Response:
This is a high priority for FDA. FDA is working expeditiously to conduct an evidence-based review of the available information and identify appropriate next steps. FDA anticipates communicating our actions publicly by February 2016.

8. Bioequivalence standards and ophthalmological solutions

The agreement remains concerned about the FDA's reliance on the use of draft guidance to make substantive policy decisions. The agreement requests a report documenting FDA's review and solicitation of scientific data impacting bioequivalence standards and patients suffering from ophthalmologic conditions.

FDA Response:
FDA will provide the requested report.

9. White Oak Master Plan

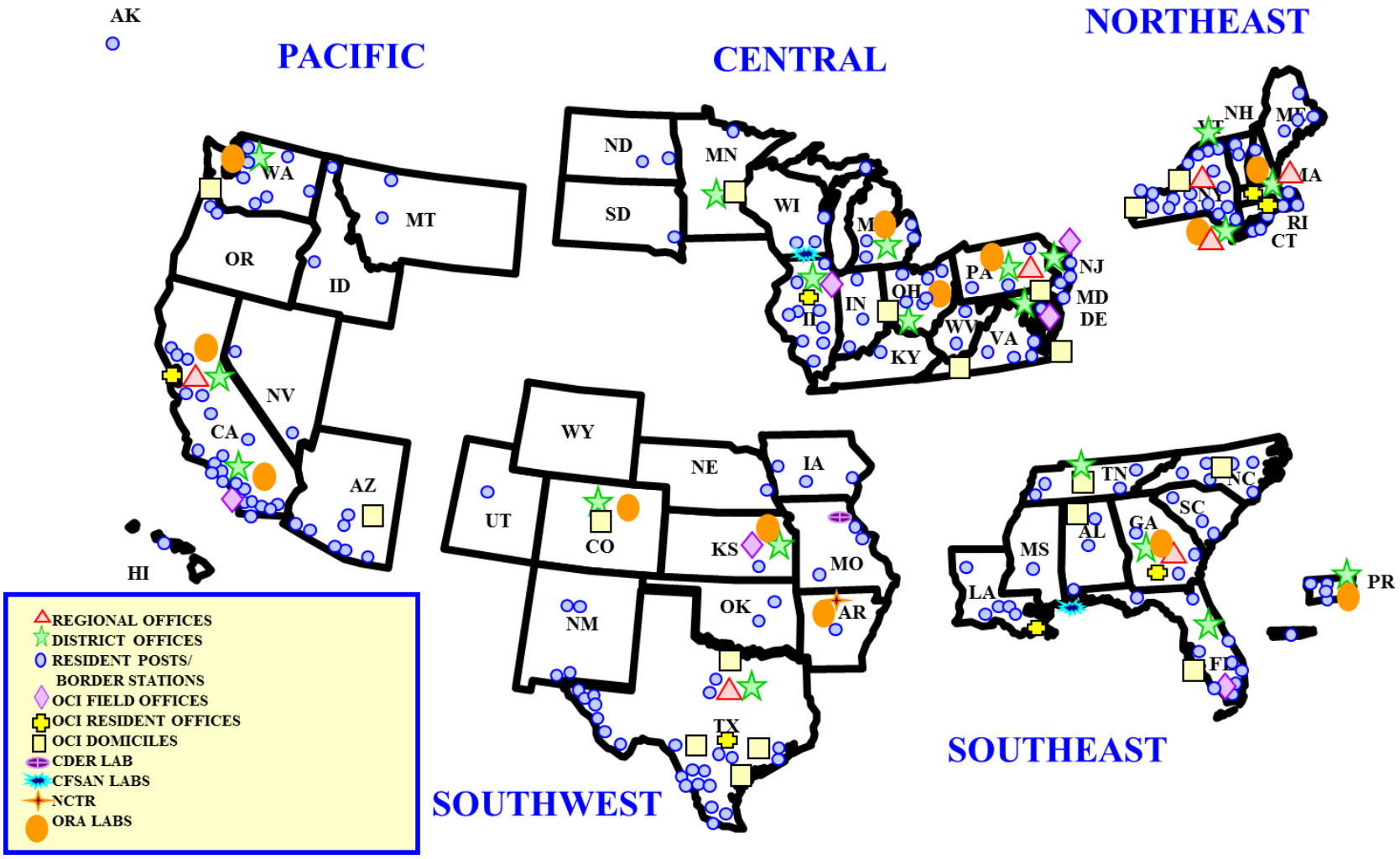
The agreement includes $5,000,000 for FDA to complete a feasibility study to update and issue a revised Master Plan for land inside and contiguous to the White Oak campus in order to address its expanded workforce and the facilities needed to accommodate them. The agreement directs FDA to report on this effort by January 1, 2016.

FDA Response:
FDA will provide the requested report.

FDA will provide the $5,000,000 to the General Services Administration (GSA) via a Reimbursable Work Authorization by January 31, 2016 with a scope of work requesting an update of the Master Plan. It is estimated that it will take GSA 90 to 120 days to award a contract for this work. FDA will request that alternatives to include both additional federal construction on the White Oak Federal Research Center (FRC) and leasing office space in close proximity to the FRC be included in the Master Plan update.

The project schedule will include both alternate paths as well as the need to address National Environmental Policy Act (NEPA) requirements associated with federal construction and the GSA justification process for the acquisition of leased space, if necessary. A project schedule will be provided once finalized by the contractor, GSA and FDA.

GEOGRAPHICAL DISTRIBUTION OF FDA FACILITIES



HIV/AIDS FUNCTIONAL TABLE

Program	FY 2015 Acual	FY 2016 Estimate	FY 2017 Estimate
Human Drugs	$35,590	$35,590	$35,590
Biologics	35,462	35,462	35,462
Medical Devices	207	346	346
Field Activity	31,000	32,240	33,480
Toxological	---	179	33
Other Activities	3,410	3,410	3,410
Total HIV/AIDS	**$105,669**	**$107,227**	**$108,321**

CROSSCUTS

(dollars in thousands)	FY 2015 Actual	FY 2016 Estimate	FY 2017 Estimate
AIDS/HIV	**105,669**	**107,227**	**108,321**
Budget Authority (non-add)	*105,669*	*107,227*	*108,321*
Alzheimer's Disease	**5,215**	**6,897**	**6,399**
Budget Authority (non-add)	*2,359*	*3,944*	*3,274*
Antimicrobial Resistance	**32,486**	**41,683**	**41,683**
Budget Authority (non-add)	*30,442*	*39,638*	*39,638*
Bioterrorism	**242,118**	**242,118**	**242,118**
Food Defense (non-add)	217,490	217,490	217,490
Medical Countermeasures Initiative (MCMi) (non-add)	*24,552*	*24,552*	*24,552*
Physical Security (non-add)	6,970	6,970	6,970
Life Sciences-Biodefense Complex (non-add)	17,658	17,658	17,658
Breast Cancer	**22,463**	**26,605**	**26,726**
Budget Authority (non-add)	*7,537*	*8,002*	*7,769*
Drug Abuse	**12,548**	**10,024**	**9,945**
Budget Authority (non-add)	*3,391*	*3,392*	*3,207*
Food Safety	**1,228,893**	**1,336,207**	**1,547,843**
Budget Authority (non-add)	*1,214,478*	*1,319,656*	*1,338,076*
Global Health	**166,992**	**184,807**	**185,733**
Budget Authority (non-add)	*101,104*	*105,545*	*103,828*
Laboratory Safety	**9,873**	**11,339**	**11,219**
Budget Authority (non-add)	*9,423*	*10,880*	*10,755*
Mental Health	**20,904**	**21,625**	**21,701**
Budget Authority (non-add)	*8,065*	*8,421*	*8,247*
Methamphetamine	**661**	**678**	**689**
Budget Authority (non-add)	*130*	*131*	*131*
Opioids	**26,875**	**27,619**	**28,144**
Budget Authority (non-add)	*4,204*	*4,766*	*4,925*
Pandemic Influenza	**35,680**	**35,648**	**33,942**
Budget Authority (non-add)	*30,695*	*30,641*	*28,919*
Patient Safety	**436,030**	**428,261**	**431,269**
Budget Authority (non-add)	*192,355*	*197,385*	*197,124*
Pediatric Drugs	**12,508**	**14,034**	**12,128**
Budget Authority (non-add)	*5,176*	*6,196*	*4,200*
Prevention	**4,096,112**	**4,304,588**	**4,578,514**
Budget Authority (non-add)	*2,301,906*	*2,421,097*	*2,445,729*
Precision Medicine	**---**	**2,392**	**4,392**
Budget Authority (non-add)	---	*2,392*	*4,392*
Quality Improvement	**26,735**	**27,124**	**27,124**
Budget Authority (non-add)	*11,522*	*11,620*	*11,620*
Tobacco	**566,000**	**599,000**	**635,000**
Budget Authority (non-add)	---	---	---
Women's Health	**6,634,105**	**101,729**	**101,168**
Budget Authority (non-add)	*5,300,607*	*41,840*	*40,200*
Office of Women's Health (non-add)	*5,265,000*	*4,442*	*4,442*
Breast Cancer (MQSA) (non-add)	*23,662*	*28,391*	*28,799*

CENTRAL ACCOUNTS

Program (dollars in thousands)	FY 2015 Actuals		FY 2016 Estimates		FY 2017 Estimates	
	BA	UF	BA	UF	BA	UF
Foods	**16,465**	-	**16,801**	-	**17,137**	-
Center	5,219	-	5,324	-	5,430	-
Field	11,246	-	11,478	-	11,707	-
Human Drugs	**17,760**	**47,988**	**18,138**	**55,087**	**18,500**	**56,595**
Center	14,810	45,328	15,106	53,317	15,408	54,574
Field	2,950	2,660	3,032	1,770	3,092	2,021
Biologics	**5,327**	**7,340**	**5,422**	**7,930**	**5,530**	**7,455**
Center	4,405	6,471	4,493	6,623	4,583	6,779
Field	922	869	929	1,306	947	675
Animal Drugs and Feeds	**3,283**	**1,573**	**3,347**	**1,607**	**3,414**	**1,643**
Center	1,993	1,542	2,032	1,575	2,073	1,610
Field	1,291	31	1,314	32	1,341	33
Devices and Radiological Health	**7,703**	**6,818**	**7,841**	**8,146**	**7,998**	**9,349**
Center	5,675	6,699	5,789	7,488	5,904	8,223
Field	2,028	119	2,052	658	2,093	1,126
National Center for Toxicological Research	**852**	-	**869**	-	**886**	-
FDA Headquarters	**12,476**	**5,842**	**12,726**	**6,719**	**12,980**	**6,877**
Total	**63,866**	**69,560**	**65,143**	**79,489**	**66,446**	**81,918**

HHS CHARGES AND ASSESSMENTS

Assessments:	**$851,748**
NIH eRA Grants Management System Pilot phase to support migration of FDA Grants Data into the Department's consolidated eRA Grants Management System	$169,638
Department Ethics Program The Office of General Counsel provides legal and related support services to FDA	$680,000
Federal Audit Clearinghouse	$2,110
Fee For Service:	**$37,707,980**
Program Support Center/ Office of the Secretary Provides various services to the FDA, including some Information and Systems Management Services	**$13,401,223**
Financial Management Services (FMS)	$727,447
Strategic Acquisition Service	$544,141
Administrative Operations Service Includes costs for security, building operations, shredding, storage, graphics, property disposal, trans-share, mail and payroll services	$8,777,071
Facilities and Logistics Service Includes building operations, shredding, storage, property disposal,	$3,352,564
Federal Occupational Health (FOH): FDA agency health units and services	**$2,752,152**
Information & System Management Services	**$19,060,697**
Freedom of Information (FOIA)	$369,139
Unified Financial Management Systems (UFMS) The Program Support Center delivers and manages O&M Services for UFMS by supporting daily operations.	$6,366,000
HCAS Operations and Maintenance HCAS O&M services provide support for daily operations of the HCAS application.	$2,230,000
Telecommunication Services Telecommunications team offers expertise on technical design & support for customer systems	$250,000
HHS NET	$308,350
Enterprise Application Services include activities for HHS' civilian employees and Commissioned Corps Officers, and maintenance and operation of the systems housing current and historical pay and leave records	$7,043,300
Human Resource Center – Rockville, Maryland	**$2,493,908**

Jointly Funded Projects:	**$4,486,371**
Enterprise Information Management FDA's contribution to the HHS Enterprise Infrastructure Fund. Funds are used for Enterprise Information Technology programs/projects outlined in the Enterprise Information Technology Strategic Plan or benefitting the corporate enterprise, such as enterprise buys/licenses.	$1,239,804
International Health Bilateral Agreement Agreement to provide funding in support of the bilateral-multilateral activities performed on behalf of the Public Service by the Office of Global Health Affairs	$1,231,159

Other Jointly Funded Projects	**$2,015,408**
CFO Audit of Financial Statements Audit services to be performed at the FDA in support of the fiscal year 2010 financial statement audit of the Department of Health and Human Services (DHHS) contracted and monitored by Office of the Inspector General (OIG) and its components, and related services.	$422,032
Office of Public Health/Blood Safety Agreement to provide funding for the advisory committee on Blood Safety	$300,000
Regional Health Administrators IAG with OS/Office of Public Health & Science to support ten Regional Health Administrators. Their core mission is to promote understanding of and control functions within their respective regions improvements in public health and to conduct specific management.	$308,010
President's Council on Bioethics TAP to fund the council which advises the President of Bioethical issues related to the advances in biomedical science and technology	$294,000
Media Monitoring Provides Agency leadership and staff with the latest analysis of what the media is reporting about Department-wide and Agency-specific priorities, initiatives, and programs	$145,546
Intra-department Council on Native American Affairs IAG with DHHS, Administration on Children and Families, for staff and administrative support for the Interdepartmental Council for Native American Affairs Committee meetings and assignments.(ICNAA), to conduct semi-annual Council meetings, Executive	$15,909
National Science Advisory Board for Biosecurity Agreement with NIH to develop improved biosecurity measures for classes of legitimate biological research that could be misused to threaten public health or national security	$325,000
NIH Negotiation of Indirect Cost Rates (New) Agreement with NIH/OD to support costs associated with the negotiation of indirect cost rates with commercial organizations	$17,000
HHS Broadcast Studio (New) It is a communication tool used for departmental messaging, both to internal and external audiences and is key to the government-wide open government initiative.	$106,751
OPM USAJOBS Fees charged by OPM to Federal Agencies to cover the cost of providing Federal Employment Information and services. OPM assesses an annual per-capita-fee based on each OPDIV percentage of the Departments total FTE on all paid employees with access to USAJOBs. The cost is distributed within HHS based on each OPDIV percentage of the Departments total FTE.	$81,160

HHS CHARGES AND ASSESSMENTS: FY 2015 – FY 2017

Activity	FY 2015 Actual	FY 2016 Estimate	FY 2017 Estimate
Assessments	**$ 851,748**	**$ 875,000**	**$ 899,000**
Fee for Service	**$ 37,707,980**	**$ 36,016,774**	**$ 39,467,000**
Program Support Center/OS	$ 13,401,223	$ 12,790,521	$ 13,410,000
Federal Occupational Health	$ 2,752,152	$ 2,982,407	$ 3,051,000
Information System Management Service	$ 19,060,697	$ 17,749,938	$ 20,116,000
Human Resource Center – Rockville, Marylanc	$ 2,493,908	$ 2,493,908	$ 2,890,000
Jointly Funded Services	**$ 4,486,371**	**$ 4,548,655**	**$ 3,939,992**
International Health - Bilateral Agreement	$ 1,239,804	$ 1,347,781	$ 840,000
Other Jointly Funded Projects	$ 1,231,159	$ 1,231,159	$ 1,231,159
Other Jointly Funded Projects	$ 2,015,408	$ 1,969,715	$ 1,868,833
Total	**$ 43,046,099**	**$ 41,440,429**	**$ 44,305,992**

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GLOSSARY OF ACRONYMS

3D	3-Dimensional
ADE	Adverse Drug Experience
ADEPT	Autonomous Diagnostics to Enable Prevention and Therapeutics
ADUFA	Animal Drug User Fee Act
AGDUFA	Animal Generic Drug User Fee Act
AMP	Real Property Asset Management Plan
ANDA	Abbreviated New Drug Application
ARL	Arkansas Regional Laboratory
ARS	Agriculture Research Service
B&F	Buildings and Facilities
BA	Budget Authority
BARDA	Biomedical Advanced Research and Development Authority
BIMO	Bioresearch Monitoring
BLA	Biologic License Application
BMAR	Backlog of Maintenance and Repairs
BPA	Bisphenol A
BPCA	Best Pharmaceuticals for Children Act
BsUFA	Biosimilars User Fee Act
CBER	Center for Biologics Evaluation and Research
CBP	Customs and Border Protection
CBRN	Chemical, Biological, Radiological, and Nuclear
CDC	Centers for Disease Control and Prevention
CDER	Center for Drug Evaluation and Research
CDRH	Center for Devices and Radiological Health
CFR	Code of Federal Regulations
CFSAN	Center for Food Safety and Applied Nutrition
cGMP	current Good Manufacturing Practice
CIO	Chief Information Officer
CMS	Centers for Medicare & Medicaid Services

CORE	Coordinated Outbreak Response and Evaluation
CORES	Collaborative Opportunities for Research Excellence in Science
CRADA	Cooperative Research & Development Agreement
CTP	Center for Tobacco Products
CUP	Central Utility Plant
CVM	Center for Veterinary Medicine
CY	Calendar Year
DNA	DeoxyriboNucleic Acid
DOD	Department of Defense
DSC	Drug Safety Communication
DSCSA	Drug Supply Chain Security Act
EADB	Estrogenic Activity Database
EDKB	Endocrine Disruptor Knowledge Base
EDSR	Electronic Document Submission and Review
eMDR	Electronic Medical Device Reporting
E.O.	Executive Order
ESPC	Energy Savings Performance Contract
EUA	Emergency Use Authorizations
FACA	Federal Advisory Committee Act
FATA	Federal Anti-Tampering Act
FCI	Facility Condition Index
FCN	Food Contact Substance Notification
FD&C Act	Federal Food, Drug and Cosmetic Act
FDA	Food and Drug Administration
FDAAA	Food and Drug Administration Amendments Act of 2007
FDAMA	Food and Drug Administration Modernization Act
FDASIA	Food and Drug Administration Safety and Innovation Act
FDA-TRACK	FDA-wide performance management system
FERN	Food Emergency Response Network
FOIA	Freedom of Information Act

FSIS	Food Safety Inspection Service
FSMA	Food Safety Modernization Act
FSVP	Foreign Supplier Verification Programs
FTE	Full Time Equivalent
FVM	Foods and Veterinary Medicine
FY	Fiscal Year
GDUFA	Generic Drug User Fee Amendments
GFI	Guidance for Industry
GIS	Geographic Information System
GMP	Good Manufacturing Practices
GSA	General Services Administration
GUDID	Global UDI Database
HDE	Humanitarian Device Exemption
HHS	Department of Health and Human Services
HIV	Human Immunodeficiency Virus
HQ	FDA Headquarters
HRWG	High Risk Working Group
HSP	Human Subject Protection
HUD	Humanitarian Use Device
HVAC	Heating, Ventilation, and Air Conditioning
ICH	International Conference on Harmonization
ICOR	International Consortium of Orthopedic Registries
IDE	Investigational Device Exemption
IND	Investigational New Drug
IOM	Institute of Medicine
IRB	Institutional Review Board
IT	Information Technology
IVD	In Vitro Diagnostics
JLC	Jefferson Labs Complex

LSBC	Life Sciences-Biodefense Laboratory Complex
MCM	Medical Countermeasure
MCMi	Medical Countermeasures initiative
MDE	Medical Device Epidemiology
MDIC	Medical Device Innovation Consortium
MDR	Medical Device Reporting
MDSAP	Medical Device Single Audit Program
MDUFA	Medical Device User Fee Amendments
MDUFMA	Medical Device User Fee and Modernization Act
MFRPS	Manufactured Food Regulatory Program Standards
MOD	Module
MQSA	Mammography Quality Standards Act
MRI	Magnetic Resonance Imaging
MRTP	Modified Risk Tobacco Product
NADA	New Animal Drug Application
NARMS	National Antimicrobial Resistance Monitoring System
NCTR	National Center for Toxicological Research
NDA	New Drug Application
NGO	Non-governmental Organization
NIH	National Institutes of Health
NME	New Molecular Entity
NSE	Not Substantially Equivalent
NYTS	National Youth Tobacco Survey
OC	Office of the Commissioner
OCI	Office of Criminal Investigations
OFVM	Office of Foods and Veterinary Medicine
OGROP	Office of Global Regulatory Operations and Policy
OMB	Office of Management and Budget
OOPD	Office of Orphan Products Development

ORA	Office of Regulatory Affairs
ORRR	Other Rent and Rent Related
OTC	Over-the-counter
PAC	Pediatric Advisory Committee
PAD	Program Activity Data
PAHPRA	Pandemic and All-Hazards Preparedness Reauthorization Act of 2013
PATH	Population Assessment of Tobacco and Health
PB	President's Budget
PC	Preventive Control
PDC	Pediatric Device Consortia
PDMA	Prescription Drug Marketing Act
PDUFA	Prescription Drug User Fee Act
PMA	Premarket Approval Application
PREA	Pediatric Research Equity Act
PREDICT	Predictive Risk-Based Evaluation for Dynamic Import Compliance Targeting
PRISM	Post-Licensure Rapid Immunization Safety Monitoring
REMS	Risk Evaluation and Mitigation Strategy
SE	Substantial Equivalence (when used by Device and Biologics Programs)
SLEP	Shelf Life Extension Program
SP	Strategic Priority
SRL	Southeast Regional Laboratory
SW	Southwest
TB	Tuberculosis
TCORS	Tobacco Centers of Regulatory Science
TPSAC	Tobacco Product Scientific Advisory Committee
TTIMS	Transfusion-Transmitted Infections Monitoring System
UDI	Unique Device Identification

UESC	Utility Energy Service Contract
UF	User Fee
USC	United States Code
USDA	United States Department of Agriculture
VICH	Veterinary International Conference on Harmonization
WD	Withdrawn
WEAC	Winchester Engineering and Analytical Center
WHO	World Health Organization

GLOSSARY OF TABLES

All-Purpose Table (APT)	Provides comprehensive financial information on the budget at the program, project, and activity (PPA) levels.
Amounts Available for Obligation	Lists the base appropriations followed by any rescissions, supplemental funding, transfers, and any other adjustments to provide a total obligation level for that Fiscal Year.
Appropriations History	Lists the ten year history of appropriations and estimates for FDA's Salary and Expenses and Building and Facilities appropriations, excluding indefinite user fees.
Budget Authority By Activity	Provides budget authority and FTE for three years: FY 2015, FY 2016, and FY 2017.
Budget Authority Crosswalks	Highlights absorptions, reductions, and increases by program line and major initiative for a given fiscal year − for example Food Safety, Medical Product Safety and Availability, and Rent and Infrastructure − starting from the prior budget year.
Crosscuts	Shows programs that are crosscutting throughout FDA. Each crosscut program line in the table shows a "snapshot" of the funding that is targeted toward a specific area in each fiscal year and provides an indication of resource trends.
Detail of Full-Time Equivalent Employment (FTE)	Provides FTE data by FDA organizational component − such as CFSAN, CDER, CBER, etc. − for each of the three fiscal years included in the CJ (Prior Year, Current Year, and Budget Year) as well as a five-year history of the average General Schedule (GS) grade.
Detail of Positions	Provides information on the number of General Schedule (GS), Executive Level (EX), Executive Service (ES), Commissioned Corps (CC), Administratively Determined (AD), and other positions − including Administrative Law Judges (AL), Wage Grade − across FDA, including a three year history of the average GS levels and salaries.
HIV/AIDS Functional Table	Shows a "snapshot" of the funding in FDA targeted toward HIV/AIDS related programs and activities for five fiscal years and provides a breakout of the funding by program line.
Major Activities Table	Provides an overview of the FDA budget by program and major activities: Food Safety and Medical Product Safety and Availability, including absorptions, reductions, and increases.

Object Classification Tables	Provides information by object class for budget authority, user fees, and total program level − which is a combination of both budget authority and user fees. Object classes are categories that present obligations by the items or services purchased by the Federal Government.
Physicians' Comparability Allowance (PCA)	Provides information on physicians' comparability allowances that are paid to eligible Government physicians (including dentists) in order to recruit and retain them. The PCA is paid only to physicians serving in positions for which there is a significant recruitment and retention problem.
Salaries and Expenses	Breakdowns all salaries and expenses incurred by FDA by object class. The totals for each object class match the object classification tables for budget authority, user fees, and total program level. This table excludes object classes 31.0 to 43.0, when compared to the Object Classification tables.
Summary of Changes	Summarizes the changes in estimates from FY 2016 to FY 2017 and explains those changes on an item-by-item basis by budget authority, user fees, program level, and FTE.