Report to Congress

Generic Drug User Fee Amendments

FY 2022

Executive Summary

On July 9, 2012, the President signed into law the Food and Drug Administration Safety and Innovation Act,[1] which included the authorization of the Generic Drug User Fee Amendments of 2012 (GDUFA I). GDUFA I authorized the Food and Drug Administration (FDA) to collect user fees for human generic drug activities and enabled FDA to advance a more efficient human generic drug review program, which has helped increase the availability of more affordable generic drugs.

On August 18, 2017, the President signed into law the FDA Reauthorization Act of 2017 (FDARA),[2] which included the Generic Drug User Fee Amendments of 2017 (GDUFA II). FDA worked closely with the generic drug industry during the development of GDUFA II to enhance the success started under GDUFA I with two main areas of focus: (1) reducing the number of review cycles to approval and (2) increasing the number of approvals of safe, effective, high-quality, and lower-cost generic drugs.

This collaborative work included identifying opportunities for earlier and enhanced communications to support the efficient and effective pre-market review of generic drugs. This communication has been critical for FDA to meet the new, shorter review goals negotiated under GDUFA II for generic drug submissions that are public health priorities. These communication enhancements and shorter review goals are supported by an overall user fee structure that is consistent with FDA's anticipated workload and public health priorities.

Another key feature introduced in GDUFA II is the pre-abbreviated new drug application (pre-ANDA) program, which has strengthened and diversified the pipeline of generic drug applications with a robust development pathway that includes support to developers of complex generic drug products. The pre-ANDA program features Product Development, Pre-Submission, and Mid-Review Cycle Meetings. In particular, Product Development and Pre-Submission Meetings provide clarity around regulatory expectations for prospective applicants early in the generic product development cycle and assist with the development of more complete application submissions, with the ultimate goal of reducing a generic product's time in the pipeline from concept to development to market.

As described in this report, these and many other elements of the GDUFA II program have produced success for the generic drug program and, more importantly, for the American people. This annual report presents preliminary data on FDA's success in

[1] http://www.gpo.gov/fdsys/pkg/PLAW-112publ144/pdf/PLAW-112publ144.pdf.

[2] http://www.congress.gov/115/plaws/publ52/PLAW-115publ52.pdf.

meeting fiscal year (FY) 2022 review goals and commitments for GDUFA II and updates the data for FY 2021.

Highlighted Achievements – FY 2022

In FY 2022, FDA continued to experience the impact of the coronavirus disease 2019 (COVID-19) public health emergency. Despite this, FDA met or exceeded a majority of its FY 2022 review performance goals. Highlights of these activities are provided below.

Generic Drug Assessment and Approval Activity Highlights

In FY 2022, FDA approved 722 abbreviated new drug applications (ANDAs) and tentatively approved 183 ANDAs. A critically important subset of these generic drug approvals is the category of first generics, which provide access to needed therapies that treat a wide range of medical conditions and for which no generic competition had previously existed. Significant first generic approvals for FY 2022 include the following:

- Cyclosporine ophthalmic emulsion (Reference Listed Drug (RLD) Restasis) – approved February 2022
- Dapagliflozin tablets (RLD Farxiga) – approved February 2022
- Breyna (budesonide and formoterol fumarate dihydrate) inhalation aerosol (RLD Symbicort) – approved March 2022
- Lacosamide tablets (RLD Vimpat) – approved March 2022
- Brimonidine tartrate and timolol maleate ophthalmic solution (RLD Combigan) – approved April 2022
- Pemetrexed for injection (RLD Alimta) – approved May 2022

Also in FY 2022, under the competitive generic therapy (CGT) pathway established under FDARA, FDA continued to increase the number of approvals of products for which there was insufficient generic drug competition. Under this pathway, FDA can take now steps to expedite the development and review of ANDAs for drug products for which there is inadequate generic competition. In FY 2022, 40 generic drug products (proposed in 32 ANDAs) were approved with eligibility for CGT exclusivity, with an average time to market after approval of around 27 days for the products that received CGT exclusivity.

In addition, in FY 2022, FDA continued its role in addressing this nation's public health emergencies. Since the beginning of the pandemic, the Center for Drug Evaluation and Research issued over 1,700 COVID-19-related ANDA approvals consisting of more than

100 original ANDAs and more than 1,600 supplements, including for critical medications that have been in shortage due to high demand for these products to treat patients with COVID-19. In addition, in support of the opioid public health emergency, FDA approved several naloxone generic drugs, including one nasal spray.

GDUFA Science and Research Program Highlights

FDA's GDUFA Science and Research Program generated more than 75 peer-reviewed scholarly articles, one provisional patent, more than 120 external talks, and more than 85 posters that were exhibited at national and international scientific and medical conferences related to generic drugs.

In particular, FDA's approval of the first generic cyclosporine ophthalmic emulsion (RLD Restasis) in February 2022 followed over 9 years of GDUFA-supported research.

ANDA Development and Review Support Activities Highlights

FDA's efforts to increase its review efficiency—and thereby improve patient access to generic drugs—have been greatly enhanced by FDA's publication of policy documents on important topics related to generic drug development and assessment. In FY 2022, FDA issued several policy documents, including 17 guidances for industry (not including Product-Specific Guidances (PSGs)), five Manuals of Policies and Procedures, and one *Federal Register* notice.

In addition to the publication of policy documents, FDA provided important scientific guidance and recommendations to give generic drug applicants better opportunities to efficiently develop generic drug products and to prepare more complete ANDAs. These recommendations are often described in PSGs. In FY 2022, FDA issued 177 PSGs (58 of which were for complex products). As of September 30, 2022, FDA had published 2,032 PSGs on FDA's Product-Specific Guidances for Generic Drug Development website.[3]

Also in FY 2022, FDA continued its successful implementation of the law widely known as "CREATES"[4] by issuing Covered Product Authorizations (CPAs) to eligible product developers seeking to obtain samples of brand products subject to a Risk Evaluation and Mitigation Strategy with elements to assure safe use. FDA's activities included the

[3] https://www.fda.gov/drugs/guidances-drugs/product-specific-guidances-generic-drug-development.

[4] The enactment of "CREATES" or "the CREATES Act" made available a pathway for developers of potential generic drug or biosimilar biological products to obtain samples of brand products that they need to support their applications. This law was enacted as section 610 ("Actions for Delays of Generic Drugs and Biosimilar Biological Products"), 21 U.S.C. 355-2, of Division N of Pub. L. 116-94, the Further Consolidated Appropriations Act, 2020, including amendments to section 505-1 of the Federal Food, Drug, and Cosmetic Act (21 U.S.C. 355-1).

issuance of 22 CPAs for eligible product developers seeking to develop generic products. (Issuance of these CPAs allows generic product developers to more easily obtain the samples needed for product development and testing and, ultimately, for the submission of ANDAs.)

Table of Contents

Acronym List

ADF	Abuse-Deterrent Formulation
ANDA	Abbreviated New Drug Application
AI	Artificial Intelligence
API	Active Pharmaceutical Ingredient
BE	Bioequivalence
CBER	Center for Biologics Evaluation and Research
CDER	Center for Drug Evaluation and Research
CGMP	Current Good Manufacturing Practice
CGT	Competitive Generic Therapy
CPA	Covered Product Authorization
CR	Complete Response
CRL	Complete Response Letter
CFD	Computational Fluid Dynamics
DDCP	Drug-Device Combination Products
DMF	Drug Master File
DPI	Dry Powder Inhaler
DRL	Discipline Review Letter
eCTD	Electronic Common Technical Document
EU	European Union
FDA	Food and Drug Administration
FD&C Act	Federal Food, Drug, and Cosmetic Act
FDARA	FDA Reauthorization Act of 2017
FDF	Finished Dosage Form
FIB-SEM	Focused Ion Beam Scanning Electron Microscopy
FTE	Full Time Equivalent

FY	Fiscal Year (October 1 to September 30)
GDUFA	Generic Drug User Fee Amendments
GDUFA I	Generic Drug User Fee Amendments of 2012
GDUFA II	Generic Drug User Fee Amendments of 2017
IA	Import Alert
IR	Information Request
IVPT	In Vitro Permeation Test
IVRT	In Vitro Release Test
LAI	Long-acting Injectable, Insertable, or Implantable
MAPP	Manual of Policies and Procedures
MIE	Model-Integrated Evidence
ML	Machine Learning
MRA	Mutual Recognition Agreement
NAI	No Action Indicated
NDSRI	Nitrosamine Drug Substance Related Impurities
OAI	Official Action Indicated
OC	Office of the Commissioner
ORA	Office of Regulatory Affairs
PAI	Pre-Approval Inspection
PAS	Prior Approval Supplement
PBPK	Physiologically Based Pharmacokinetic
PD	Pharmacodynamic
PFC	Pre-Submission Facility Correspondence
PK	Pharmacokinetic
PSD	Particle Size Distribution
PSG	Product-Specific Guidance
QCP	Quantitative Clinical Pharmacology

QMM	Quality Management Maturity
RLD	Reference Listed Drug
RPM	Regulatory Project Manager
RTR	Refuse to Receive
SBIA	Small Business & Industry Assistance
TA	Tentative Approval
TSH	Thyroid Stimulating Hormone
USP	United States Pharmacopeia
UL	Untitled Letter
VAI	Voluntary Action Indicated
WL	Warning Letter
WCF	Working Capital Fund

I. Introduction

Millions of Americans use generic drugs to treat a wide variety of medical conditions.[1]

The Food and Drug Administration (FDA or Agency) helps ensure that human generic drug products are thoroughly tested and shown to meet the statutory standards for approval, including to show that these products (1) contain the same active ingredients; (2) have the same route of administration, labeling (with certain exceptions), strength, and dosage form; (3) are bioequivalent (e.g., that they deliver the same amount of active ingredients to the site of action); and (4) maintain the same strict adherence to good manufacturing practice regulations as their brand-name counterparts.[2]

The Generic Drug User Fee Amendments (GDUFA) authorize FDA to collect user fees to support human generic drug activities.

Since the implementation of GDUFA I in fiscal year (FY) 2012, FDA has met or exceeded a majority of its GDUFA goals while maintaining its high standards for generic drug products regarding safety, efficacy, and quality. GDUFA has provided the mechanism necessary to secure the resources needed to gain efficiencies, promote innovation, and enhance the overall generic drug review process.

On August 18, 2017, the President signed the FDA Reauthorization Act of 2017 (Pub. L. 115-52)[3] into law, which included GDUFA II. Under GDUFA II, FDA is continuing to modernize the generic drug program by improving its efficiency, quality, and predictability. GDUFA II provides an opportunity for generic drug applications that are public health priorities to receive a shorter review goal date. For example, FDA may grant requests for priority review for applications for generic drug products that are not blocked by patents or market exclusivities if there are not more than three FDA-approved applications for such drug products. This policy supports competition for drug products with limited competition.

GDUFA II also includes increased communications and collaborations between FDA and industry to help improve the quality of submissions and identify, earlier in the process, potential issues that could impact approval of an application. For example, under GDUFA II, FDA issues information requests or discipline review letters during the review of an

[1] According to a report compiled by the Association for Accessible Medicines that was primarily based on data from IQVIA, generic drugs saved the American healthcare system nearly $2.6 trillion in the last 10 years due to the availability of affordable generics. The report is available at https://accessiblemeds.org/sites/default/files/2022-09/AAM-2022-Generic-Biosimilar-Medicines-Savings-Report.pdf.

[2] Some generic drugs are permitted, after the grant of a suitability petition, to deviate in minor ways from the innovator they copy. See section 505(j)(2)(C) of the Federal Food, Drug, and Cosmetic Act.

[3] www.congress.gov/115/plaws/publ52/PLAW-115publ52.pdf.

original abbreviated new drug application (ANDA) (1) when further information or clarification is needed or would be helpful to allow completion of a discipline review or (2) to convey preliminary thoughts on possible deficiencies, respectively. These tools allow applicants to address some issues within the original review cycle so that approval or tentative approval (TA) within the first cycle will be more achievable.

GDUFA II also introduced a pre-ANDA program designed to support the development of complex generic drug products, which features Product Development, Pre-Submission, and Mid-Review Cycle Meetings to help clarify regulatory expectations early in product development and during application review.

Under GDUFA II, FDA is also taking steps to foster the earlier development of guidance, including product-specific guidances (PSGs), which are intended to share the Agency's thoughts on key aspects that should be addressed in related ANDA submissions. Providing timely guidance to generic drug developers allows the applicants to build the Agency's recommendations into their research and development programs and helps them submit higher quality ANDAs. This results in fewer deficiencies in applications submitted to FDA, which should lead to more first cycle approvals.

A. Performance Results Presented in This Report

GDUFA commitments cover a wide range of improvements, including enhancing communications between FDA and industry throughout the review process, enhancing communications regarding inspections of facilities and sites, improving predictability and transparency, promoting the efficiency and effectiveness of the review process, enhancing drug master file (DMF) reviews, enhancing accountability and reporting, and advancing regulatory science initiatives. This report details FDA's preliminary performance results in the final year of GDUFA II and presents the Agency's progress in accomplishing the FY 2022 program goals and enhancements of GDUFA II. Unless otherwise noted, all preliminary data for FY 2022 are as of September 30, 2022.

The information below provides some key terms and concepts used in this report.

- FDA will annually report GDUFA performance data for each fiscal year receipt cohort (defined as submissions received from October 1 to September 30). Some submissions received in FY 2022 may have associated goals in the subsequent fiscal year. In these cases, FDA's performance will be reported in the subsequent fiscal year.
- As part of GDUFA II, FDA committed to "continue to work through the goal date if, in FDA's judgment, continued work would likely result in an imminent TA that could prevent forfeiture of 180-day exclusivity or in an imminent approval" (section II(B)(6) of the GDUFA Reauthorization Performance Goals and Program

Enhancements Fiscal Years 2018-2022 (GDUFA II Commitment Letter)).[4] There have been numerous instances in which the Agency worked past a goal date rather than issuing a complete response letter (CRL) by the goal date to resolve outstanding issues with the ANDA and issued an approval or TA. As a result of these efforts under this program enhancement commitment, FDA has reduced the number of review cycles necessary for approval of these applications and facilitated more timely access to generic drug products.

- For a review goal to be met, FDA must review the specified percentage of submissions within the review goal. For example, in FY 2022, to meet the goal for standard original ANDAs, FDA must review and act on 90 percent of them within 10 months.
- To "act on an application" means that FDA will issue a CRL, an approval letter, a TA letter, or a refuse-to-receive (RTR) letter.
- Submission types with shorter review goals (e.g., standard and priority minor ANDA amendments with 3-month goal dates) tend to have a larger percentage of reviews completed by the end of the fiscal year, and their preliminary performance is a more reliable indicator of their final performance. However, submission types (e.g., standard original ANDA submissions) with longer review goals (e.g., a 10-month goal date in FY 2022) tend to have a smaller percentage of reviews completed by the end of the fiscal year, and their preliminary performance is a less reliable indicator of their final performance.

Definitions of key terms used throughout this report can be found in Appendix A of this report.

[4] www.fda.gov/media/101052/download.

II. GDUFA II Workload

The table below summarizes the GDUFA II workload for FYs 2018 through 2021 and presents preliminary workload data for FY 2022.

Table I. GDUFA II Workload

GDUFA II Workload	FY 2018	FY 2019	FY 2020	FY 2021*	FY 2022
Original ANDAs					
Total Original ANDAs Submitted	1,044	909	865	810	857
ANDAs Submitted After RTR for Failure to Pay User Fees	16	14	10	7	8
ANDAs Submitted After RTR for Technical Reasons	81	51	42	47	49
ANDA Solicited Amendments					
Total Solicited ANDA Amendments Submitted	2,328	2,275	2,028	1,911	1,814
Prior Approval Supplements (PASs)					
Total PAS Submissions	1,103	889	1,133	1,351	1,298
PAS Solicited Amendments					
Total Solicited PAS Amendments Submitted	160	199	268	260	393
DMFs					
Total DMFs Submitted	358	308	263	258	229
Controlled Correspondence (CC)					
Total CC Submitted	2,933	3,206	3,596	3,924	3,732

* Numbers were revised to reflect updates to the data presented in the FY 2021 GDUFA Performance Report.
† DMF submissions include only DMFs for which the holder has paid fees. Thus, the number of DMF submissions in a fiscal year will keep increasing as fees get paid.

III. GDUFA II Review Goals

In GDUFA II, most goal dates are measured against a 90 percent metric, and there are different review times for standard and priority ANDA submissions. This scheme not only streamlines the process but promotes more predictable timelines for actions.

A. FY 2022 Preliminary Performance Results

The table below reflects the GDUFA II ANDA review goals for FYs 2018 to 2022.

Table II. GDUFA II ANDA Review Goals for FYs 2018 to 2022

GDUFA II Review Goals by Submission Type	Review and Act on % Within	FY 2018	FY 2019	FY 2021	FY 2021	FY 2022
Original ANDA Review*						
Standard Original ANDA Submissions	10 months	90%	90%	90%	90%	90%
Priority Original ANDA Submissions (if applicant meets the requirements of a Pre-Submission Facility Correspondence (PFC))	8 months	90%	90%	90%	90%	90%
Priority Original ANDA Submissions (if applicant does not meet the requirements of a PFC)	10 months	90%	90%	90%	90%	90%
Amendment Review						
Standard Major ANDA Amendments (if pre-approval inspection (PAI) is not required)	8 months	90%	90%	90%	90%	90%
Standard Major ANDA Amendments (if PAI is required)	10 months	90%	90%	90%	90%	90%
Priority Major ANDA Amendments (if PAI is not required)	6 months	90%	90%	90%	90%	90%
Priority Major ANDA Amendments (if PAI is required and applicant meets the requirements of a PFC)	8 months	90%	90%	90%	90%	90%
Priority Major ANDA Amendments (if PAI is required and applicant does not meet the requirements of a PFC)	10 months	90%	90%	90%	90%	90%
Standard and Priority Minor ANDA Amendments	3 months	90%	90%	90%	90%	90%
PAS Review Time						
Standard PAS (if PAI is not required)	6 months	90%	90%	90%	90%	90%
Standard PAS (if PAI is required)	10 months	90%	90%	90%	90%	90%
Priority PAS (if PAI is not required)	4 months	90%	90%	90%	90%	90%
Priority PAS (if PAI is required and applicant meets the requirements of a PFC)	8 months	90%	90%	90%	90%	90%
Priority PAS (if PAI is required and applicant does not meet the requirements of a PFC)	10 months	90%	90%	90%	90%	90%
PAS Amendments						
Standard Major PAS Amendment (if PAI is not required)	6 months	90%	90%	90%	90%	90%
Standard Major PAS Amendment (if PAI is required)	10 months	90%	90%	90%	90%	90%
Priority Major PAS Amendment (if PAI is not required)	4 months	90%	90%	90%	90%	90%
Priority Major PAS Amendment (if PAI is required and applicant meets the requirements of a PFC)	8 months	90%	90%	90%	90%	90%
Priority Major PAS Amendment (if PAI is required and applicant does not meet the requirements of a PFC)	10 months	90%	90%	90%	90%	90%
Standard and Priority Minor PAS Amendments	3 months	90%	90%	90%	90%	90%
Unsolicited ANDA and PAS Amendments±						
Unsolicited ANDA and PAS Amendments§	Review and act on unsolicited ANDA amendments and PAS amendments by the later of the goal date for the original submission/solicited amendment or the goal date specifically assigned to the unsolicited amendment. An unsolicited amendment goal date is assigned in the same manner as the corresponding solicited amendment goal date.					

* Section I(1) of the GDUFA II Commitment Letter.
† Section I(B) of the GDUFA II Commitment Letter.
± Section I(C) of the GDUFA II Commitment Letter.
§ The GDUFA II Commitment Letter specifies reporting unsolicited amendments submitted during the review cycle and unsolicited amendments submitted between review cycles separately. For efficient treatment of these amendments, they are combined in this report.

GDUFA II provides review goals for certain DMF commitments and CC. The table below reflects these review goals for FYs 2018 to 2022.

Table III. GDUFA II DMF Commitments and CC Review Goals for FYs 2018 to 2022

GDUFA II Goals by Commitment Type	Review-Time Goal	FY 2018	FY 2019	FY 2021	FY 2021	FY 2022
DMF						
Complete the initial completeness assessment review of Type II Active Pharmaceutical Ingredient (API) DMFs	Within 60 calendar days of the later of the date of DMF submission or DMF Fee payment	90%	90%	90%	90%	90%
CC‡‡						
Standard CC	Within 60 calendar days of submission date	90%	90%	90%	90%	90%
Complex CC	Within 120 calendar days of submission date	90%	90%	90%	90%	90%
Submitter requests to clarify ambiguities in the CC	Within 14 calendar days of request receipt	90%	90%	90%	90%	90%

‡‡ For CC that raises an issue that relates to one or more pending citizen petitions, the 60- or 120-day time frame starts on the date FDA responds to the petition (if there is only one petition) or last pending petition.

The following tables represent FDA's FY 2021 updated performance data and FY 2022 preliminary performance data. FDA continues to meet or exceed most of the review goals for the FY 2021 and 2022 cohorts. The "percent on time" column in the preliminary performance table for FY 2022 shows the percentage of submissions reviewed on time as of September 30, 2022, excluding action pending within the GDUFA review goal, and the "potential range" column shows the potential for meeting the FY 2022 GDUFA review goal.

Both tables also include two columns to reflect review metrics when FDA applied the GDUFA II Commitment Letter's imminent approval program enhancement to qualifying ANDAs. In accordance with the GDUFA II Commitment Letter, FDA may continue to work through the goal date if, in FDA's judgment, continued work would likely result in an imminent TA that could prevent forfeiture of 180-day exclusivity or in an imminent approval. These imminent approval performance numbers reflect FDA's decision to achieve an approval or TA within 60 days of the goal date rather than to act on the goal date, e.g., issue a CRL.

Table IV. GDUFA FY 2021 Updated Review Goals

GDUFA FY 2021 Updated Review Goals by Submission Type	Review and Act on 90 % Within	Actions Complete*	Percent on Time	Potential Range‡	On Time Imminent Approval	Imminent Approval Potential Range
Original ANDA Review						
Standard Original ANDA Submissions	10 months	580 of 605	96%	93% to 96%	98%	95% to 98%
Priority Original ANDA Submissions (if applicant meets requirements of a PFC)	8 months	40 of 41	95%	95% to 95%	95%	95% to 95%
Priority Original ANDA Submissions (if applicant does not meet requirements of a PFC)	10 months	145 of 149	93%	91% to 93%	96%	93% to 96%
Amendment Review						
Standard Major ANDA Amendments (if PAI is not required)	8 months	973 of 977	96%	96% to 96%	98%	98% to 98%
Standard Major ANDA Amendments (if PAI is required)	10 months	45 of 54	76%	76% to 76%	76%	76% to 76%
Priority Major ANDA Amendments (if PAI is not required)	6 months	148 of 148	96%	96% to 96%	99%	99% to 99%
Priority Major ANDA Amendments (if PAI is required and applicant meets the requirements of a PFC)	8 months	1 of 1	100%	100% to 100%	100%	100% to 100%
Priority Major ANDA Amendments (if PAI is required and applicant does not meet the requirements of a PFC)	10 months	8 of 8	100%	100% to 100%	100%	100% to 100%
Standard and Priority Minor ANDA Amendments	3 months	715 of 718	89%	89% to 89%	97%	97% to 97%
Unsolicited ANDA Amendments	Varies	434 of 440	91%	91% to 91%	--	--
PAS Review Time						
Standard PAS (if PAI is not required)	6 months	1136 of 1142	98%	98% to 98%	98%	98% to 98%
Standard PAS (if PAI is required)	10 months	66 of 70	71%	71% to 71%	73%	73% to 73%
Priority PAS (if PAI is not required)	4 months	126 of 126	100%	100% to 100%	100%	100% to 100%
Priority PAS (if PAI is required and applicant meets the requirements of a PFC)	8 months	1 of 2	50%	50% to 50%	50%	50% to 50%
Priority PAS (if PAI is required and applicant does not meet the requirements of a PFC)	10 months	3 of 3	100%	100% to 100%	100%	100% to 100%
PAS Amendments						
Standard Major PAS (if PAI is not required)	6 months	95 of 95	99%	99% to 99%	99%%	99% to 99%
Standard Major PAS (if PAI is required)	10 months	3 of 6	33%	33% to 33%	33%	33% to 33%
Priority Major PAS (if PAI is not required)	4 months	18 of 19	95%	95% to 95%	95%	95% to 95%
Priority Major PASs (if PAI is required and applicant meets the requirements of a PFC)	8 months	--	--	--	--	--
Priority Major PASs (if PAI is required and applicant does not meet the requirements of a PFC)	10 months	1 of 1	100%	100% to 100%	100%	100% to 100%
Standard and Priority Minor PAS Amendments	3 months	144 of 144	99%	99% to 99%	99%	99% to 99%
Unsolicited PAS Amendments	Varies	14 of 14	93%%	93% to 93%	93%%	93% to 93%

GDUFA FY 2021 Updated Review Goals by Submission Type	Review and Act on 90 % Within	Actions Complete*	Percent on Time	Potential Range‡	On Time Imminent Approval	Imminent Approval Potential Range
DMF						
Complete the initial completeness assessment review of Type II API DMF	60 calendar days	412 of 412	98%	98% to 98%	--	--
CC						
Standard CC	60 calendar days	3656 of 3668	98%	98% to 98%	--	--
Complex CC	120 calendar days	254 of 256	98%	98% to 98%	--	--
Clarification of Ambiguities in CC Response	14 calendar days	36 of 36	100%	100% to 100%	--	--

* Actions completed include any action taken regardless of whether it met the review-time goal. Even though no new submissions have come in (in the cohort year), the size of the cohort increases as the goal type is assigned.
† "Percent on time" represents the current percentage of actions FDA completed within the review-time goal.
‡ "Range" represents the minimum (all pending become late) and maximum (all pending reviewed on time) performance.

Table V. GDUFA FY 2022 Preliminary Review Goals

GDUFA FY 2022 Preliminary Review Goals by Submission Type	Review Time Goal	Actions Complete*	Percent on Time	Potential Range‡	On Time Imminent Approval	Imminent Approval Potential Range
Original ANDA Review						
Standard Original ANDA Submissions	10 months	89 of 553	99%	16% to 100%	100%	16% to 100%
Priority Original ANDA Submissions (if applicant meets requirements of a PFC)	8 months	18 of 43	100%	42% to 100%	100%	42% to 100%
Priority Original ANDA Submissions (if applicant does not meet requirements of a PFC)	10 months	29 of 149	100%	19% to 100%	100%	19% to 100%
Amendment Review						
Standard Major ANDA Amendments (if PAI is not required)	8 months	271 of 799	94%	33% to 98%	99%	34% to 99%
Standard Major ANDA Amendments (if PAI is required)	10 months	6 of 61	100%	10% to 100%	100%	10% to 100%
Priority Major ANDA Amendments (if PAI is not required)	6 months	61 of 123	95%	48% to 98%	100%	50% to 100%
Priority Major ANDA Amendments (if PAI is required and applicant meets the requirements of a PFC)	8 months	--	--	--	--	--
Priority Major ANDA Amendments (if PAI is required and applicant does not meet the requirements of a PFC)	10 months	2 of 12	100%	17% to 100%	100%	17% to 100%
Standard and Priority Minor ANDA Amendments	3 months	585 of 803	85%	63% to 89%	98%	72% to 98%
Unsolicited ANDA Amendments	Varies	335 of 464	87%	65% to 91%	--	--
PAS Review Time						
Standard PAS (if PAI is not required)	6 months	703 of 1082	98%	64% to 99%	99%	65% to 100%
Standard PAS (if PAI is required)	10 months	18 of 53	95%	34% to 98%	100%	34% to 100%
Priority PAS (if PAI is not required)	4 months	75 of 93	100%	81% to 100%	100%	81% to 100%
Priority PAS (if PAI is required and applicant meets the requirements of a PFC)	8 months	1 of 1	100%	100% to 100%	100%	100% to 100%
Priority PAS (if PAI is required and applicant does not meet the requirements of a PFC)	10 months	2 of 7	100%	29% to 100%	100%	29% to 100%
PAS Amendments						
Standard Major PAS (if PAI is not required)	6 months	86 of 154	100%	56% to 100%	100%	56% to 100%
Standard Major PAS (if PAI is required)	10 months	2 of 10	100%	20% to 100%	100%	20% to 100%
Priority Major PAS (if PAI is not required)	4 months	11 of 13	100%	85% to 100%	100%	85% to 100%
Priority Major PASs (if PAI is required and applicant meets the requirements of a PFC)	8 months	--	--	--	--	--
Priority Major PASs (if PAI is required and applicant does not meet the requirements of a PFC)	10 months	2 of 2	100%	100% to 100%	100%	100% to 100%
Standard and Priority Minor PAS Amendments	3 months	163 of 211	100%	77% to 100%	100%	77% to 100%
Unsolicited PAS Amendments	Varies	18 of 22	90%	82% to 91%	--	--

GDUFA FY 2022 Preliminary Review Goals by Submission Type	Review Time Goal	Actions Complete*	Percent on Time	Potential Range‡	On Time Imminent Approval	Imminent Approval Potential Range
DMF						
Complete the Initial Completeness Assessment Review of Type II API DMF	60 calendar days	397 of 397	99%	99% to 99%	--	--
CC						
Standard CC	60 calendar days	3175 of 3439	99%	92% to 99%	--	--
Complex CC	120 calendar days	213 of 291	100%	73% to 100%	--	--
Clarification of Ambiguities in CC Response	14 calendar days	28 of 28	89%%	89% of 89%		--

* Actions completed include any action taken regardless of whether it met the review-time goal. Even though no new submissions have come in (in the cohort year), the size of the cohort increases as the goal type is assigned.
"Percent on time" represents the current percentage of actions FDA completed within the review-time goal.
‡ "Range" represents the minimum (all pending become late) and maximum (all pending reviewed on time) performance.

IV. GDUFA II ANDA Review Program Enhancement Goals

Under GDUFA II, FDA committed to several program enhancement goals to improve predictability and transparency, promote efficiency and effectiveness of the review process, minimize the number of review cycles necessary for approval, increase the overall rate of approval, and facilitate greater access to generic drug products. The table below reflects these program enhancement goals for FYs 2018 to 2022.

Table VI. GDUFA Program Enhancement Goals for FYs 2018 to 2022

	Goal	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Dispute Resolution						
FDA will respond to appeals above the division level	Within 30 calendar days of the Center for Drug Evaluation and Research's (CDER's) receipt of the written appeal pursuant to the applicable goal	70%	80%	90%	90%	90%
Product Development Meetings						
FDA will grant or deny Product Development Meeting Requests	Within 30 calendar days from receipt of request	90%	90%	—	—	—
	Within 14 calendar days from receipt of request	—	—	90%	90%	90%
FDA will conduct Product Development Meetings granted	Within 120 calendar days of granting them	60%	70%	80%	90%	90%
Unless FDA is providing a written response to satisfy the meeting goal, FDA will aspire to provide preliminary written comments before each Product Development Meeting	5 calendar days before the meeting	-	-	-	-	-
FDA will provide meeting minutes	Within 30 calendar days of the meeting	-	-	-	-	-
Pre-Submission Meetings						
FDA will grant or deny Pre-Submission Meeting Requests	Within 30 calendar days from receipt of request	90%	90%	-	-	-
	Within 14 calendar days from receipt of request	-	-	90%	90%	90%
FDA will conduct Pre-Submission Meetings granted	Within 120 calendar days of granting them	60%	70%	80%	90%	90%
If appropriate to the purpose of the meeting, FDA will provide preliminary written comments	5 calendar days before each meeting	-	-	-	-	-
FDA will provide meeting minutes	Within 30 calendar days of the meeting	-	-	-	-	-
DMF First Cycle Review Deficiency						
FDA will strive to grant DMF first cycle review deficiency teleconferences	Within 30 calendar days	-	-	-	-	-
Review Classification Changes During Review Cycle						
FDA will notify the applicant if the review classification of the ANDA or PAS changes from standard to priority during a review cycle of an ANDA or PAS	Within 14 calendar days of the date of the change	-	-	-	-	-
FDA will notify the applicant if a previous ANDA or ANDA amendment was subject to priority review but a subsequent ANDA amendment is subject to a standard review	Within 14 calendar days of the date of receipt of the solicited amendment	-	-	-	-	-

	Goal	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
FDA will decide whether to reclassify a major amendment or standard review status	Within 30 calendar days of date of FDA's receipt of the request for a reclassification	90%	90%	90%	90%	90%
Post-CRL						
FDA will provide a scheduled date for a requested post-CRL teleconference	Within 10 calendar days of the request for a teleconference	90%	90%	90%	90%	90%
FDA will conduct requested post-CRL teleconferences on the FDA-proposed date	Within 30 calendar days of the receipt of the written request	90%	90%	90%	90%	90%
Safety Determination Letters						
FDA will issue safety determination letters	Within 60 calendar days of the date of submission of disclosure authorization	90%	90%	90%	90%	90%

A. Preliminary Performance Results – FY 2022

The following tables represent FDA's FY 2021 updated and FY 2022 preliminary performance results on the GDUFA II program enhancement goals. Program enhancement goals differ from review goals in that "review goals" directly pertain to the review of a generic drug submission, whereas "program enhancement goals" are goals for activities that support generic drug review and approval in general. For example, one of FDA's review goals under GDUFA II is to review and act on 90 percent of standard original ANDAs within 10 months of the date of ANDA submission. The goals for Pre-Submission Meetings below are examples of program enhancement goals. Pre-Submission Meetings are not directly related to the review of a generic drug submission; however, it is important that FDA meet its Pre-Submission Meeting goals and other program enhancement goals to support efficient reviews and more generic drug approvals.

Table VII. GDUFA II Updated FY 2021 Program Enhancement Goals

GDUFA II FY 2021 Updated Performance*	Review Goal	Goal	Actions Completed	Percent on Time‡	Potential Range§
Dispute Resolution					
FDA will respond to appeals above the division level	Within 30 calendar days of CDER's receipt of the written appeal pursuant to the applicable goal	90%	4 of 4	100%	100% to 100%
Product Development Meetings					
FDA will grant or deny Product Development Meeting Requests	Within 14 calendar days from receipt of request	90%	102 of 102	100%	100% to 100%
FDA will conduct Product Development Meetings granted	Within 120 calendar days of granting them	90%	77 of 77	99%	99% to 99%
Unless FDA is providing a written response to satisfy the meeting goal, FDA will aspire to provide preliminary written comments before each Product Development Meeting	5 calendar days before the meeting	-	50 of 50	98%	98% to 98%
FDA will provide meeting minutes	Within 30 calendar days following the meeting	-	38 of 38	100%	100% to 100%
Pre-Submission Meetings					
FDA will grant or deny Pre-Submission Meeting Requests	Within 14 calendar days from receipt of request	90%	5 of 5	100%	100% to 100%
FDA will conduct Pre-Submission Meetings granted	Within 120 days of granting them	90%	4 of 4	100%	100% to 100%
If appropriate to the purpose of the meeting, FDA will provide preliminary written comments	5 calendar days before each meeting	-	4 of 4	100%	100% to 100%
FDA will provide meeting minutes	Within 30 calendar days of the meeting	-	1 of 1	100%	100% to 100%
DMF First Cycle Review Deficiency					
FDA will strive to grant DMF first cycle review deficiency teleconferences	Within 30 calendar days	-	4 of 4	75%	75% to 75%
Review Classification Changes During Review Cycle					
FDA will notify the applicant if the review classification of the ANDA or PAS changes from standard to priority during a review cycle of an ANDA or PAS	Within 14 calendar days of the date of the change	-	47 of 47	100%	100% to 100%
FDA will notify the applicant if a previous ANDA or ANDA amendment was subject to priority review but a subsequent ANDA amendment is subject to a standard review	Within 14 calendar days of the date of receipt of the solicited amendment	-	183 of 183	96%	96% to 96%
FDA will decide whether to reclassify a major amendment or standard review status	Within 30 calendar days of the date of FDA's receipt of the request for a reclassification	90%	66 of 66	97%	97% to 97%

GDUFA II FY 2021 Updated Performance*	Review Goal	Goal	Actions Completed	Percent on Time‡	Potential Range§
Post-CRL					
FDA will provide a scheduled date for a requested post-CRL teleconference	Within 10 calendar days of the request for a teleconference	90%	73 of 73	91%	91% to 91%
FDA will conduct requested post-CRL teleconferences on the FDA-proposed date	Within 30 calendar days of the receipt of the written request	90%	73 of 73	98%	98% to 98%
Safety Determination Letters					
FDA will issue safety determination letters‖	Within 60 calendar days of the date of submission of disclosure authorization	90%	--	--	--

* Numbers were changed to reflect updates to the data presented in the FY 2021 GDUFA Performance Report.
† Actions completed include any action taken regardless of whether it met the review-time goal.
‡ "Percent on time" represents the current percentage of actions FDA completed within the review-time goal.
§ "Range" represents the minimum (all pending become late) and maximum (all pending reviewed on time) performance.
‖ The law widely known as the CREATES Act made available a pathway for developers of potential generic drug or biosimilar biological products to obtain samples of brand products that they need to support their applications. This provision was enacted as section 610 ("Actions for Delays of Generic Drugs and Biosimilar Biological Products"), 21 U.S.C. 355-2, of Title I, Subtitle F of Division N of the Further Consolidated Appropriations Act of 2020 (Pub. L. 116-94, Dec. 20, 2019), including amendments to section 505-1 of the FD&C Act, 21 U.S.C. 355-1. As part of CREATES implementation, FDA is no longer issuing the Safety Determination Letters to generic product developers that FDA had been issuing prior to the CREATES Act under the December 2014 draft guidance for industry *How to Obtain a Letter from FDA Stating that Bioequivalence Study Protocols Contain Safety Protections Comparable to Applicable REMS for RLD*. Instead, FDA now issues Covered Product Authorizations (CPAs) under CREATES, which are accounted for under the complex CC GDUFA category (in the case of CPAs sought for ANDA development). FDA published a draft guidance titled *How to Obtain a Covered Product Authorization* in September 2022, which replaced the December 2014 draft guidance for industry *How to Obtain a Letter from FDA Stating that Bioequivalence Study Protocols Contain Safety Protections Comparable to Applicable REMS for RLD*.

Table VIII. GDUFA II FY 2022 Preliminary Program Enhancement Goals

GDUFA II FY 2022 Preliminary Performance	Review Goal	Goal	Actions Completed*	Percent on Time	Potential Range‡
Dispute Resolution					
FDA will respond to appeals above the division level	Within 30 calendar days of CDER's receipt of the written appeal pursuant to the applicable goal	90%	10 of 12	100%	83% to 92%
Product Development Meetings					
FDA will grant or deny Product Development Meeting Requests	Within 14 calendar days from receipt of request	90%	113 of 113	98%	98% - 98%
FDA will conduct Product Development Meetings granted	Within 120 calendar days of granting them	90%	68 of 83	99%	81% - 99%
Unless FDA is providing a written response to satisfy the meeting goal, FDA will aspire to provide preliminary written comments before each Product Development Meeting	5 calendar days before the meeting	--	31 of 40	100%	78% - 100%
FDA will provide meeting minutes	Within 30 calendar days following the meeting	--	18 of 21	100%	86% - 100%
Pre-Submission Meetings					
FDA will grant or deny Pre-Submission Meeting Requests	Within 14 calendar days from receipt of request	90%	8 of 8	100%	100% - 100%
FDA will conduct Pre-Submission Meetings granted	Within 120 days of granting them	90%	2 of 2	100%	100% - 100%
If appropriate to the purpose of the meeting, FDA will provide preliminary written comments	5 calendar days before each meeting	-	2 of 2	100%	100% - 100%
FDA will provide meeting minutes	Within 30 calendar days of the meeting	-	2 of 2	100%	100% - 100%
DMF First Cycle Review Deficiency					
FDA will strive to grant DMF first cycle review deficiency teleconferences	Within 30 calendar days	-	8 of 8	75%	75% to 75%
Review Classification Changes During Review Cycle					
FDA will notify the applicant if the review classification of the ANDA or PAS changes from standard to priority during a review cycle of an ANDA or PAS	Within 14 calendar days of the date of the change	-	32 of 32	100%	100% to 100%
FDA will notify the applicant if a previous ANDA or ANDA amendment was subject to priority review, but a subsequent ANDA amendment is subject to a standard review	Within 14 calendar days of the date of receipt of the solicited amendment	-	114 of 115	93%	93% to 93%
FDA will decide whether to reclassify a major amendment or standard review status	Within 30 calendar days of date of FDA's receipt of the request for a reclassification	90%	97 of 103	90%	100%

GDUFA II FY 2022 Preliminary Performance	Review Goal	Goal	Actions* Completed	Percent on Time	Potential Range‡
Post-CRL					
FDA will provide a scheduled date for a requested post-CRL teleconference	Within 10 calendar days of the request for a teleconference	90%	65 of 65	88%	88% to 88%
FDA will conduct requested post-CRL teleconferences on the FDA-proposed date	Within 30 calendar days of the receipt of the written request	90%	65 of 65	100%	100% to 100%
Safety Determination Letters					
FDA will issue safety determination letters§	Within 60 calendar days of the date of submission of disclosure authorization	90%	--	--	--

* Actions completed include any action taken regardless of whether it met the review-time goal.
† "Percent on time" represents the current percentage of actions FDA completed within the review-time goal.
‡ "Range" represents the minimum (all pending become late) and maximum (all pending reviewed on time) performance.
§ The law widely known as the CREATES Act made available a pathway for developers of potential generic drug or biosimilar biological products to obtain samples of brand products that they need to support their applications. This provision was enacted as section 610 ("Actions for Delays of Generic Drugs and Biosimilar Biological Products"), 21 U.S.C. 355-2, of Title I, Subtitle F of Division N of the Further Consolidated Appropriations Act of 2020 (Pub. L. 116-94, Dec. 20, 2019), including amendments to section 505-1 of the FD&C Act, 21 U.S.C. 355-1. As part of CREATES implementation, FDA is no longer issuing the Safety Determination Letters to generic product developers that FDA had been issuing prior to the CREATES Ac under the December 2014 draft guidance for industry *How to Obtain a Letter from FDA Stating that Bioequivalence Study Protocols Contain Safety Protections Comparable to Applicable REMS for RLD*. Instead, FDA now issues Covered Product Authorizations (CPAs) under CREATES, which are accounted for under the complex CC GDUFA category (in the case of CPAs sought for ANDA development). FDA published a draft guidance titled *How to Obtain a Covered Product Authorization* in September 2022, which replaced the December 2014 draft guidance for industry *How to Obtain a Letter from FDA Stating that Bioequivalence Study Protocols Contain Safety Protections Comparable to Applicable REMS for RLD*.

V. Additional Activities to Promote Transparency and Enhance Communications

Under GDUFA, FDA committed to increase the transparency and communication between FDA and generic drug developers.

A. Policy-Related Document Highlights

In FY 2022, FDA published many guidances for industry[5] and Manuals of Policies and Procedures (MAPPs)[6] that provide important information for generic drug developers. These efforts support development of high-quality applications, streamlined application assessments, and ultimately can help facilitate faster generic drug approvals. In FY 2022, FDA published the following guidances for industry and MAPPs:

- Draft guidance for industry: *Q13 Continuous Manufacturing of Drug Substances and Drug Products* (October 2021)
- Draft guidance for industry: *Cover Letter Attachments for Controlled Correspondences and ANDA Submissions* (December 2021)
- Draft guidance for industry: *Inspection of Injectable Products for Visible Particulates* (December 2021)
- Final guidance for industry: *Good ANDA Submission Practices* (January 2022)
- Final guidance for industry: *Information Requests and Discipline Review Letters Under the Generic Drug User Fee Amendments* (January 2022)
- Draft guidance for industry: *Revising ANDA Labeling Following Revision of the Reference* (January 2022)
- Draft guidance for industry: *Considerations for Waiver Requests for pH Adjusters in Generic Drug Products Intended for Parenteral, Ophthalmic, or Otic Use* (April 2022)
- Final guidance for industry: *Drug Products, Including Biological Products, that Contain Nanomaterials* (April 2022)
- Final guidance for industry: *Assessing User Fees Under the Generic Drug User Fee Amendments of 2017* (May 2022)

[5] FDA's guidance documents may be accessed at www.fda.gov/regulatoryinformation/guidances/.

[6] These MAPPs may be accessed at www.fda.gov/about-fda/center-drug-evaluation-and-research/cder-manual-policies-procedures-mapp.

- Draft guidance for industry: *Risk Management Plans to Mitigate the Potential for Drug Shortages* (May 2022)
- Final guidance for industry: *Investigating Out-of-Specification (OOS) Test Results for Pharmaceutical Production - Level 2 revision* (May 2022)
- Draft guidance for industry: *Non-Penicillin Beta-Lactam Drugs: A CGMP Framework for Preventing Cross-Contamination* (June 2022)
- Draft guidance for industry: *Evaluation of Therapeutic Equivalence* (July 2022)
- Final guidance for industry: *Orange Book Questions & Answers* (July 2022)
- Final guidance for industry: *Failure to Respond to an ANDA Complete Response Letter Within the Regulatory Timeframe* (July 2022)
- Final guidance for industry: *Changes to Disposable Manufacturing Materials: Questions and Answers* (July 2022)
- Draft guidance for industry: *Electronic Submission of Expedited Safety Reports from IND-Exempt BA/BE Studies* (August 2022)
- MAPP 5220.5 Revision 1: *Issuance of Information Requests and/or Discipline Review Letters for Abbreviated New Drug Applications* (January 2022)
- MAPP 5019.1: *Allowable Excess Volume/content in Injectable Drug and Biological Products* (January 2022)
- MAPP 5240.10: *Classifying Approved New Drug Products and Drug-Device Combination Products as Complex Products for Generic Drug Development Purposes* (April 2022)
- MAPP 5210.5 Revision 3: *Review of Investigational New Drug Applications (Bio-INDs) by the Office of Generic Drugs* (April 2022)
- MAPP 5223.6: *Assessment of the User Interface of a Drug-Device Combination Product Submitted in a Pre-ANDA Communication or an ANDA* (June 2022)

These guidances and MAPPs have helped bring greater transparency to the ANDA review and approval process and have provided industry with a range of useful information to assist them in developing generic drug products and in improving the overall quality of their ANDA submissions, supporting efficient assessment and timely approval of ANDAs. For example, the draft guidance for industry *Considerations for Waiver Requests for pH Adjusters in Generic Drug Products Intended for Parenteral, Ophthalmic, or Otic Use* provided industry with important information intended to help support timely generic drug approvals for products with qualitative (Q1) or quantitative (Q2) differences in pH adjusters from their reference listed drug (RLD). (Such differences

have been a particularly challenging issue for generics' approvability.) In particular, FDA published this guidance to

- Describe how applicants can request a waiver—under 21 CFR 314.99(b) with respect to a pH adjuster—of the requirement that a drug product intended for parenteral, ophthalmic, or otic use generally must contain the same inactive ingredients in the same concentration as the RLD

- Share its current thinking as to why, in certain instances, a difference in pH adjuster from the RLD may be acceptable in an ANDA based on the role that pH adjusters play in drug formulations

- Provide recommendations on (1) the type of information that applicants should consider submitting with a § 314.99(b) waiver request when an ANDA applicant asks the Agency to waive the inactive ingredient requirements for pH adjusters and (2) the format and process for submitting such waiver requests

Also in FY 2022, FDA continued to engage in other efforts to increase its transparency and enhance communications with generic drug developers. For example, as required by the Orange Book Transparency Act of 2020, FDA transmitted a report to Congress on the listing of patent information in the *Approved Drug Products with Therapeutic Equivalence Evaluations* publication, commonly known as the Orange Book. The report summarized public comments regarding the types of patent information that should be included in, or removed from, the Orange Book and announced FDA's intent to form a multidisciplinary working group to more closely evaluate whether additional clarity is needed regarding the types of patent information that should be included in, or removed from, the Orange Book, consistent with the statutory requirements for patent listing in the Federal Food, Drug, and Cosmetic Act (FD&C Act). In addition, FDA expanded its list of approved new drug applications (NDA) that are no longer protected by patents or exclusivities and for which FDA has not approved an ANDA referencing that NDA product (known as the List of Off-Patent, Off-Exclusivity Drugs without an Approved Generic); this list was expanded to include nonprescription drug products (not just prescription drug products).

B. Regulatory and Scientific Outreach Activities Highlights

In FY 2022, FDA hosted or co-hosted the following meetings, webinars, and public workshops to promote transparency through regulatory and scientific outreach and to facilitate enhanced communications through dialogue with academic experts and pharmaceutical industry representatives on numerous issues impacting generic drugs:

Meeting/Workshop	Date(s) Held
FDA and the Center for Research on Complex Generics Co-Hosted a Workshop: Regulatory Utility of Mechanistic Modeling to Support Alternative Bioequivalence Approaches www.fda.gov/drugs/news-events-human-drugs/fda-and-center-research-complex-generics-co-hosted-workshop-regulatory-utility-mechanistic-modeling This virtual workshop addressed how mechanistic modeling and simulation can support generic product development and regulatory submissions. Presenters shared case studies that illustrated the current state of mechanistic modeling for bioequivalence (BE) assessments, and panel discussions focused on developing a consensus about best practices for using physiologically based pharmacokinetics (PBPK) and computational fluid dynamics (CFD) modeling in this context. Notably, the concept of a Model Master File was introduced and explored as an approach to improve model-sharing between model developers, the generic industry, and FDA.	9/30/2021-10/1/2021
Pharmaceutical Quality Symposium 2021: Innovations in a Changing World https://www.fda.gov/drugs/news-events-human-drugs/pharmaceutical-quality-symposium-2021-innovations-changing-world-10262021-10272021 This symposium addressed the latest developments in pharmaceutical quality and highlighted ways in which innovations have been embraced in a changing world. Speakers shared lessons learned from the COVID-19 public health emergency, described recent regulatory innovations related to pharmaceutical quality, connected science and research to regulatory actions, and explained how FDA is supporting the use of new technologies in the manufacture of pharmaceuticals.	10/26/2021 – 10/27/2021
Public Meeting on the Reauthorization of Generic Drug User Fee Amendments (GDUFA) www.fda.gov/drugs/news-events-human-drugs/public-meeting-reauthorization-generic-drug-user-fee-amendments-gdufa-11162021-11162021 This virtual public meeting discussed recommendations that were proposed for the reauthorization of GDUFA for FYs 2023 through 2027 (GDUFA III). Discussions with industry representatives focused on advancing earlier cycle approvals for ANDA submissions through enhanced communication and review processes; enhancing the development, assessment, and approval of complex generic products; and assuring a sound financial foundation for GDUFA III. The implications of these objectives for numerous product development and regulatory processes were considered.	11/16/2021

Meeting/Workshop	Date(s) Held
FDA and the Center for Research on Complex Generics Co-Hosted a Workshop: Establishing the Suitability of Model-Integrated Evidence to Demonstrate Bioequivalence for Long-Acting Injectable and Implantable Drug Products www.fda.gov/drugs/news-events-human-drugs/fda-and-center-research-complex-generics-co-hosted-workshop-establishing-suitability-model This virtual workshop engaged academia, relevant stakeholders, and experts in the field of modeling and simulation in the generic and new drug industries to explore, identify and recommend best practices for the development and assessment of model-integrated approaches for BE assessments of long-acting injectables and implants. Discussions during the workshop focused on how model-integrated approaches support innovative study designs and data analyses and on how these approaches can be validated and verified. The collaborative development of best practices for model validation and verification was identified as a key component to facilitate the availability of more long-acting injectables and implantable generic drug products for the American public.	11/30/2021
Drug Permeability: Best Practices for Biopharmaceutics Classification System-Based Biowaivers www.fda.gov/drugs/news-events-human-drugs/drug-permeability-best-practices-biopharmaceutics-classification-system-based-biowaivers-12062021 This virtual workshop discussed industry, academic, and regulatory experience with generating and evaluating permeability data that might facilitate the implementation of Biopharmaceutics Classification System (BCS)-based biowaivers that can help avoid unnecessary human studies. The objective of these discussions was to enable the efficient global development of high-quality generic drug products. In addition to presentations and a panel discussion, this workshop included parallel breakout sessions on in vitro and in silico permeability methods, excipient effects on permeability, and the use of labels and literature data to appropriately designate the permeability class of a drug.	12/6/2021
SBIA Webinar: Bioequivalence Studies with Pharmacokinetic Endpoints for Drugs Submitted Under an ANDA www.fda.gov/drugs/news-events-human-drugs/bioequivalence-studies-pharmacokinetic-endpoints-drugs-submitted-under-anda-02242022 This webinar helped orient attendees to information in FDA's revised draft guidance for industry titled *Bioequivalence Studies with Pharmacokinetic Endpoints for Drugs Submitted Under an ANDA*, which was updated in August 2021 to clarify the Agency's recommendations regarding BE information submitted in an ANDA. The presentations and discussions during the webinar described major changes from the previous draft	2/24/2022

Meeting/Workshop	Date(s) Held
guidance published in 2013; provided clarifications to comments received through the public docket; and explained how principles described in the revised draft guidance, considered in conjunction with PSG recommendations and other pre-submission communications, could facilitate the development and assessment of generic drugs.	
Generic Drugs Forum 2022: The Current State of Generic Drugs **www.fda.gov/drugs/news-events-human-drugs/generic-drugs-forum-2022-current-state-generic-drugs-04262022** This virtual forum afforded attendees the opportunity to hear from subject-matter experts at FDA who represented every part of the generic drug assessment process; these experts explained the ANDA assessment process in detail, presented case studies, and provided practical advice to current and prospective generic drug applicants. The presentations and discussions focused on the pre-ANDA program, generic drug metrics, post-market safety, pre-approval inspections, and global generic drug affairs. Other topics covered in this forum included data integrity, facility evaluations, knowledge-aided assessment and structured application concepts, quality systems, and technical considerations for generic product lifecycle management.	4/26/2022- 4/27/2022
FY 2022 Generic Drug Science and Research Initiatives Public Workshop **https://www.fda.gov/drugs/news-events-human-drugs/fy-2022-generic-drug-science-and-research-initiatives-public-workshop-05092022** This virtual public workshop presented an overview of the status of current science and research initiatives for generic drugs. The workshop also provided multiple opportunities for public input on these initiatives through (1) presentations and panel discussions by generic industry representatives; (2) presentations by the public; (3) an open microphone public comment session; and (4) a *Federal Register* docket for public comments. Public feedback was sought, through the docket and during the workshop, to identify research areas that should be prioritized during the next 5 years of the GDUFA science and research program and to highlight research initiatives for FY 2023.	5/9/2022 - 5/10/2022
Quality Management Maturity Workshop **https://www.fda.gov/drugs/news-events-human-drugs/quality-management-maturity-workshop-05242022** FDA is developing a program to assess and rate the quality management maturity (QMM) of facilities that are manufacturing drug products and active pharmaceutical ingredients. In this workshop, FDA provided a vision of CDER's QMM program and discussed the following: its potential to improve supply chain decisions and reduce shortages; the relationship between QMM, quality metrics, the International Council for	5/24/2022 – 5/25/2022

Meeting/Workshop	Date(s) Held
Harmonisation of Technical Requirements for Pharmaceuticals for Human Use Q12 Lifecycle Management, and advanced manufacturing; existing quality ratings programs; research; and industry and stakeholder perspectives.	
FDA and Center for Research on Complex Generics Co-Hosted Workshop: In Vitro Release Testing and In Vitro-In Vivo Correlation of Complex Generic Ophthalmic, Injectable, Implantable, and Inserted Products **https://complexgenerics.org/IVRT-IVIVC/** This virtual workshop discussed the scientific principles and practical considerations that inform current FDA thinking for in vitro release test (IVRT) and in vitro-in vivo correlation studies to support the development and approval of complex generic ophthalmic, injectable, implantable, and inserted drug products. The workshop sessions provided an update on the progress of GDUFA-funded research activities; explored challenging scientific issues among scientists from diverse disciplines to gain insights from different perspectives; identified areas that could benefit from further research; and discussed opportunities for coordination and collaboration between FDA, the generic drug industry, academic institutions, dissolution equipment manufacturers, contract research organizations, and consultants.	6/29/2022
SBIA Webinar: Decoding the Guidance: Considerations for Waiver Requests for pH Adjusters in Generic Drug Products Intended for Parenteral, Ophthalmic, or Otic Use **www.fda.gov/drugs/news-events-human-drugs/decoding-guidance-considerations-waiver-requests-ph-adjusters-generic-drug-products-intended** This virtual webinar helped orient attendees to information in FDA's draft guidance for industry titled *Considerations for Waiver Requests for pH Adjusters in Generic Drug Products Intended for Parenteral, Ophthalmic, or Otic Use*, which was published in April 2022 to assist ANDA applicants that reference an RLD intended for parenteral, ophthalmic, or otic use but are seeking approval of a drug product that is Q1 or Q2 different from the RLD with respect to a pH adjuster. Presentations and discussions during the webinar provided an overview of the draft guidance for industry; clarified the rationale supporting the recommendations for applicants requesting 314.99(b) waivers for Q1/Q2 differences in a pH adjuster; and addressed questions submitted to the docket for this guidance.	8/10/2022
SBIA Webinar: Best Practices for Topical Generic Product Development and ANDA Submission **www.fda.gov/drugs/news-events-human-drugs/best-practices-topical-generic-product-development-and-anda-submission-08112022**	8/11/2022

Meeting/Workshop	Date(s) Held
This virtual webinar provided an overview of comparative physicochemical and structural (Q3) product characterization tests, as well as IVRT studies and in vitro permeation test (IVPT) studies for topical generic drug product development, addressing common deficiencies FDA has encountered with these types of studies submitted in ANDAs. The presentations and discussions during the webinar highlighted best practices and identified resources that FDA has developed and made publicly available to help generic drug applicants successfully implement efficient in vitro characterization-based BE approaches for topical generic products.	
Reporting Drug Amount Under Section 510(j)(3) of the FD&C Act https://www.fda.gov/drugs/news-events-human-drugs/reporting-drug-amount-under-section-510j3-fdc-act-09082022 FDA provided an overview (with examples and demonstrations) of the drug amount reporting program, including discussions of how FDA uses drug amount report data, who reports the data, and how these data are reported. FDA also provided a discussion of registration and listing requirements and how they pertain to the drug amount reporting program. The event also included industry presenters who provided feedback regarding the drug amount reporting program.	09/08/2022
SBIA Workshop: Advancing Generic Drug Development: Translating Science to Approval **www.fda.gov/drugs/news-events-human-drugs/advancing-generic-drug-development-translating-science-approval-09202022** This virtual public workshop communicated how the outcomes of FDA's GDUFA Science and Research program will guide and facilitate generic drug development, regulatory assessments, and approvals. The presentations and discussions during the workshop focused on common issues seen in ANDA submissions; mapped how GDUFA science and research outcomes not only supported the development of PSGs for complex products but also prepared FDA to provide advice during pre-ANDA meeting discussions; and examined various areas of innovative science and cutting-edge methodologies that are available now to support generic drug development. Also, the workshop provided insights into some enhancements that are being developed to improve the efficiency and effectiveness of generic drug-related interactions between industry and FDA during the next 5 years.	9/20/2022- 9/21/2022

VI. Pre-ANDA Program Goals – FY 2022 Preliminary Performance Results

Under GDUFA, FDA committed to advance scientific efforts to develop new human generic drug products and novel dosage forms. Through its regulatory science initiatives, FDA continues to work on developing tools, standards, and approaches to assess the safety, efficacy, and quality of these products and to facilitate the path of these products to market approval.

One example of FDA's commitment to this program has been its PSGs and pre-submission recommendations for regulatory submissions (e.g., pre-ANDA meeting requests, CCs). FDA developed and published 177 new and revised PSGs in FY 2022 (33 percent were for complex products).[7] The table below shows the FY 2022 PSG breakdown for complex and non-complex drug products.

Table IX. GDUFA II FY 2022 PSG Breakdown for Complex and Non-complex Drug Products

	Complex Drug Products	Non-Complex Drug Products
Number of new PSGs	38	72
Number of revised PSGs	20	47
TOTAL	58	119

These PSGs have provided industry with draft or final recommendations on the design of BE studies and scientific advice pertaining to finished dosage forms (FDFs) and APIs that can be used in the development of generic complex and non-complex drugs.

Since FY 2013, FDA has awarded 203 research contracts and grants. A complete list of FY 2018 through FY 2022 awards can be found at www.fda.gov/GDUFARegScience. The number of new and ongoing grants and contracts by fiscal year is provided in the table below.

[7] The definition of a *complex product* can be found in Appendix A of this report.

Table X. GDUFA II New and Ongoing Grants and Contracts by Fiscal Year

Fiscal Year	Number of External Research Contracts and Grants Awarded Using GDUFA Funds	
	New Contracts and Grants	Ongoing Contracts and Grants Receiving Funding
2022	15	28
2021	16	18
2020	17	18
2019	20	25
2018	24	16

A. FY 2022 GDUFA Science and Research Accomplishments

In addition to serving as the scientific basis for the development of PSGs and specific pre-ANDA communications, research outcomes from intramural and extramural research are published in peer-reviewed scientific literature and are presented and discussed at major medical and scientific meetings to facilitate the path toward generic drug product development and to contribute to general guidance development. The FY 2022 GDUFA Science and Research Program includes the following 13 research areas:

- Abuse-Deterrent Opioid Drug Products
- Complex Injectables, Formulations, and Nanomaterials
- Complex Mixtures and Peptide Products
- Data Analytics
- Drug-Device Combination Products
- Inhalation and Nasal Products
- Locally Acting PBPK Modeling
- Long-Acting Injectable and Implant Products
- Ophthalmic Products
- Oral Absorption Models and BE
- Patient Substitution of Generic Drugs
- Quantitative Clinical Pharmacology
- Topical Products

Key FY 2022 outcomes of each research program are highlighted in Appendix B of this report.

In addition, three examples are included below that illustrate how GDUFA science and research program accomplishments have facilitated the development of complex generics and enhanced patient access to high quality, affordable generic products.

- On May 23, 2022, FDA posted the Office of Generic Drugs-authored Impact Story "Effects of Realistic In Vitro Test Factors on the Aerosol Properties of Metered-Dose Inhalers."[8] Metered dose inhalers (MDIs) are mainstays in the treatment of asthma, chronic obstructive pulmonary disease, and other respiratory diseases. In a recent study, CDER's Office of Research and Standards, housed in the Office of Generic Drugs, investigated how the aerodynamic particle-size distribution and droplet-size distribution of commercial solution and suspension metered dose inhalers are affected by in vitro testing conditions. The development of generic inhalation products is challenging because the generic product should generally have the same delivery of small aerosol particles through the mouth and throat and into the lungs as the brand product. CDER scientists are helping develop more realistic laboratory models of the mouth-throat region that allow the generic industry to efficiently test their products and speed access to generic products.
- In FY 2022, FDA posted a spotlight[9] on a real-world case of levothyroxine use, which addressed concerns by a professional medical association of endocrinologists about switching patients from one levothyroxine product to another (generic) product. In particular, this spotlight highlighted how the Office of Generic Drugs-sponsored researchers meticulously culled through a national administrative claims database to assess the clinical management of thyroid function among patients undergoing treatment with approved levothyroxine products (either generic or brand-name). Robustly matched patient populations showed that patients who switched among different generic levothyroxine products maintained the same degree of thyroid health as patients who consistently used a single product. Despite medical guidelines that have recommended prescribers to generally avoid switching between levothyroxine products, the recent CDER analysis confirms that prescribers can regard FDA-approved generic drugs – even those with a narrow therapeutic index – as interchangeable.
- On December 2, 2021, FDA posted the Office of Pharmaceutical Quality-authored Impact Story "New In Vitro Methods to Understand and Mitigate Clinical Variability

[8] https://www.fda.gov/drugs/regulatory-science-action/effects-realistic-in-vitro-test-factors-aerosol-properties-metered-dose-inhalers.

[9] A Real-World Case Study of Levothyroxine Use Addresses Institutional Concerns About Generic Product Interchangeability, available at https://www.fda.gov/drugs/news-events-human-drugs/real-world-case-study-levothyroxine-use-addresses-institutional-concerns-about-generic-product?utm_medium=email&utm_source=govdelivery.

Associated with Injectable Suspensions."[10] Long-acting injectable, inserted, and implanted (collectively, LAI) products such as suspensions offer the benefits of sustained drug release and increased patient convenience; however, LAI products pose a comparatively higher risk than immediate release products due to the high drug content per dose. It is therefore critical to understand how formulation and in vitro characteristics correlate to in vivo performance. Researchers in CDER's Office of Testing and Research in the Office of Pharmaceutical Quality have developed new methods to bridge the gap between the in vitro and in vivo assessments of injectable suspensions. This research clarifies how differences in the flocculation state of injectable solutions, arising from variations in administration methods, may elucidate sources of observed pharmacokinetic (PK) variability. The researchers found that there is a strong correlation between flocculation/deflocculation behavior, particle size distribution (PSD), and drug dissolution rate. This correlation has important ramifications for understanding product performance and the assessment of generic product equivalence.

B. FY 2023 GDUFA Regulatory Science Priority Initiatives

Similar to GDUFA I, FDA agreed in the GDUFA II Commitment Letter to consult with industry and the public to create an annual list of regulatory science initiatives specific to research on generic drugs.

On May 9-10, 2022, FDA held the FY 2022 Generic Drug Science and Research Initiatives Public Workshop, which provided an overview of the status of the generic drug science and research program and an opportunity for public input in developing the FY 2023 research priorities. Information obtained during the public workshop and other inputs, e.g., comments to the public docket, were considered in developing the FY 2023 GDUFA Science and Research Priority Initiatives.[11]

Following the public workshop, feedback and comments received at the workshop and through the docket resulted in the revision of several priority areas for FY 2023, including the expansion of priorities that reflect the current landscape of regulatory science needs. FDA will continue to track and report on these priority initiatives during GDUFA III. In each year of GDUFA III, FDA may revise the list and indicate when the priority initiatives are complete.

[10] https://www.fda.gov/drugs/regulatory-science-action/new-in-vitro-methods-understand-and-mitigate-clinical-variability-associated-injectable-suspensions.

[11] The list of the FY 2022 GDUFA science and research priority initiatives can be found at www.fda.gov/drugs/generic-drugs/generic-drug-research-priorities-projects. The lists of research initiatives for earlier fiscal years are also available on FDA's Generic Drug Research Priorities and Projects webpage.

The FY 2023 GDUFA Regulatory Science Priority Initiatives identified were grouped into the following eight topic areas:

1. Develop Methods for Generics to Address Impurities such as Nitrosamines
2. Enhance the Efficiency of BE Approaches for Complex Active Ingredients
3. Enhance the Efficiency of BE Approaches for Complex Dosage Forms and Formulations
4. Enhance the Efficiency of BE Approaches for Complex Routes of Delivery
5. Enhance the Efficiency of BE Approaches for Complex Drug-Device Combination Products
6. Improve the Efficiency of BE Approaches for Oral and Parenteral Generic Products
7. Facilitate the Utility of Model-Integrated Evidence (MIE) to Support Demonstrations of BE
8. Expand the Use of Artificial Intelligence (AI) and Machine Learning (ML) Tools

A description of these topic areas and priorities is provided in Appendix C of this report.

VII. Drug Safety and Inspections Performance

FDA is committed to ensuring consistency and transparency regarding inspections.

This section satisfies the annual reporting requirement created by the GDUFA II Commitment Letter for FY 2022 to communicate final facility inspection activities for human generic drugs.

A. GDUFA II Commitments

In the GDUFA II Commitment Letter, FDA committed to include the following metrics annually as part of the GDUFA Performance Report (identified by the corresponding section of the GDUFA II Commitment Letter):

> (g) Number of inspections conducted by domestic or foreign establishment location and inspection type (PAI, current good manufacturing practice (CGMP), BE clinical and BE analytical) and facility type (FDF, API),
>
> (h) Median time from beginning of inspection to Form FDA 483 (483)[12] issuance,
>
> (i) Median time from 483 issuance to Warning Letter (WL), Import Alert (IA), and Regulatory Meeting for inspections with final classification of Official Action Indicated (OAI) or equivalent, and
>
> (j) Median time from the date of the WL, IA, and Regulatory Meeting to the resolution of OAI status or equivalent.

FDA interprets the GDUFA II Commitment Letter as follows:

- It is limited to "GDUFA facilities," which are defined as facilities associated with an ANDA that:
    - Is approved, pending, or has a TA
    - Was withdrawn and/or received a complete response (CR) during the given fiscal year, unless the withdrawn or CR date precedes the inspection start date
- If multiple applications were covered under one unique PAI, this report counts them as one inspection.
- 483 is a list of observations of objectionable conditions issued by FDA investigators to the inspected facility's management at the conclusion of an inspection. Inspections not resulting in issuance of a 483 are excluded from paragraphs "h,"

[12] More information about 483s, which are titled "Inspectional Observations," can be found at www.fda.gov/ICECI/Inspections/ucm256377.htm.

"i," and "j" of the GDUFA II Commitment Letter (section VI(C)(3)). Further, most facilities receiving a 483 are classified as Voluntary Action Indicated (VAI), and no compliance action (WL, IA, or Regulatory Meeting) is taken.

- PAIs of ANDAs only are counted in this report. If there was a PAI of a new drug application or a biologics license application in a facility that is also identified as a GDUFA facility, that PAI is not counted in this report. A PAI is not always performed at facilities named in pending applications. When performed, the PAI evaluates one or more applications pending approval with FDA. (Note that FDA may inspect facilities (1) associated with an application that are not required to self-identify under GDUFA and (2) that may not be required to register under 21 CFR part 207. Inspections of such facilities are included in the data and analysis provided below because such inspections may impact application decisions.)

- FDA conducts other types of inspections of facilities in which a conclusion of non-compliance may result in a delay or denial of application approval. Inspections other than PAIs that can also impact an application's approvability include surveillance and for-cause inspections. The result of a PAI may be a decision that an application is not approvable. Issuance of a WL, an addition to an IA, or the holding of a Regulatory Meeting, could follow other types of inspections, though not typically as a result of a PAI alone. For that reason, FDA interprets paragraphs "i" and "j" of the GDUFA II Commitment Letter (section VI(C)(3)) to apply to inspections other than PAIs.

- FDA understands paragraphs "i" and "j" of the GDUFA II Commitment Letter (section VI(C)(3)) to apply, consistent with its terms, to inspections resulting in a WL, an addition to an IA, or the holding of a Regulatory Meeting. FDA notes that there are situations in which a surveillance inspection would lead directly to a more serious enforcement action, such as a seizure, injunction, or prosecution, without a WL, IA, or Regulatory Meeting. Such rare circumstances, if they occur, would not be included.

- BE inspections have Untitled Letters (UL) issued only after an OAI inspection. A UL is not equivalent to a WL and is not included in this report.

This report reflects progress on commitments made in connection with GDUFA II started in FY 2018. Thus, this report does not include information about events that occurred before FY 2018 except as described below. Accordingly:

- For subparagraphs "g" and "h" of the GDUFA II Commitment Letter (section VI(C)(3)), this report includes an inspection for which the inspection ended in the reporting fiscal year, even if the inspection started before the reporting fiscal year. Multiple products/applications can be covered in one inspection assignment; these are counted as one inspection.

- For subparagraph “i” of the GDUFA II Commitment Letter (section VI(C)(3)), this report counts WLs, IAs, and Regulatory Meetings that were issued or held in the reporting fiscal year, even if they are based on an inspection for which the 483 was issued before the reporting fiscal year, provided it was issued during the period covered by the GDUFA II Commitment Letter.
- For subparagraph “j” of the GDUFA II Commitment Letter (section VI(C)(3)), this report counts resolutions of WLs, IAs, and Regulatory Meetings when the resolutions occurred in the reporting fiscal year, even if the WLs, IAs, or Regulatory Meetings were issued or held prior to the reporting fiscal year, provided they were issued or held in or after FY 2018, the effective starting year for GDUFA II reporting.

The table below reflects the number of FY 2022 inspections[13] conducted by domestic or foreign establishment locations, the inspection type (PAI, CGMP, BE clinical, and BE analytical), and facility type (FDF, API, other) associated with a generic application as well as the number of 483s issued with the inspections.

Table XI. Inspection Type by Location Totals

	Location			
Inspection Type	**Domestic**	**Foreign**	**Total***	**Number of 483s Issued**
PAI (API)**	2	29	31	23
PAI (API/FDF)**	0	9	9	8
PAI (FDF)**	43	46	89	70
PAI (Other)**	16	11	27	23
CGMP (API)	15	20	35	26
CGMP (API/FDF)	11	9	20	12
CGMP (FDF)	65	31	96	75
CGMP (Other)	43	8	51	29
BE Clinical**	10	50	60	10
BE Analytical**	0	0	0	0

* This table may overrepresent the number of unique inspections as some inspection assignments cover both PAI and CGMP inspections.
** Other inspections include facilities such as contract testing laboratories and repackagers.

[13] FDA does not include inspection classification decisions associated with inspections performed by other regulatory inspectorates, such as the European Union (EU) member state inspections that FDA may review in implementing the U.S.-EU Mutual Recognition Agreement. Such inspections are generally surveillance-only type inspections, and the inspections may have been performed and completed well before FDA requested a copy of the inspection report, which would complicate the assessment of median days to review and classification.

The following table shows the median time (in calendar days) between the start of inspections and the issuance of a 483 in FY 2022.

Table XII. Median Time from Beginning of Inspection to 483 Issuance in FY 2022

User Fee Program	FY 2022 Median Time (Calendar Days)
GDUFA	9

The following table shows the median time (in calendar days) in FY 2022 between the issuance of a 483 and the issuance of a WL, IA, and date of a Regulatory Meeting. This includes WLs, IAs, and Regulatory Meetings that were issued or held in the reporting fiscal year, even if they were based on an inspection for which the 483 was issued before the reporting fiscal year. The same facility may receive multiple compliance actions, for example a WL and an IA, following issuance of a 483. Most facilities receiving a 483 are classified as VAI, and no WL, IA, or Regulatory Meeting is issued or held.

Table XIII. Median Time from 483 Issuance to WL, IA, and Regulatory Meeting for Inspections with Final Classification of OAI (or Equivalent) (Calendar Days)

User Fee Program	FY 2022 Median Time FDA 483 to WL	FY 2022 Median Time FDA 483 to IA	FY 2022 Median Time 483 to Reg. Meeting
GDUFA	179	129	176

The following table shows the median time (in calendar days) between the issuance or holding of a WL, IA, and Regulatory Meeting and OAI resolution in FY 2022. "OAI resolution" includes the time to remediate CGMP issues at a site classified as OAI and the time for FDA to re-inspect the facility to confirm whether adequate remediation has taken place. The compliance action is considered resolved when the firm has sufficiently addressed the violations or deviations to allow the site to be reclassified by FDA as VAI or No Action Indicated (NAI), and, in the case of an IA or a WL, the Agency has also removed the facility from the IA or closed the WL. This includes OAI resolution of WLs, IAs, and Regulatory Meetings that were issued or held in the reporting fiscal year. The same facility may receive more than one compliance action, for example a WL and an IA, following issuance of a 483. The OAI finalized date is when the facility was classified as OAI and is different from the date of issuance of a WL, IA, or Regulatory Meeting.

Table XIV. Median Time from Date of WLs, IAs, and Regulatory Meetings to Resolution of OAI Status

User Fee Program	FY 2022 Median Time OAI Finalized to Resolution	FY 2022 Median Time WL to OAI Resolution	FY 2022 Median Time IA to OAI Resolution	FY 2022 Median Time Reg. Meeting to OAI Resolution
GDUFA	966	866	N/A	915

During FY 2022, there were 15 facilities that were issued a WL and/or had a Regulatory Meeting with an OAI resolution occurring in or after FY 2018, the beginning of the GDUFA II reporting period. Seven of these facilities were issued a WL and eight had Regulatory Meetings. Resolution includes the firm addressing the CGMP violations or deviations that resulted in the OAI outcome, as well as a reinspection and classification of the site as VAI or NAI, when appropriate.

Significant remediation efforts by the firm to resolve the CGMP issues at a site classified as OAI and subsequent reinspection by FDA to determine if the CGMP issues have been resolved are usually required before reclassification. It is unlikely that a regulatory action (e.g., WL, IA, or Regulatory Meeting) is taken, the firm's remediation efforts are completed, and the facility is reinspected and reclassified within a single fiscal year. In some instances, firms either chose not to remediate or never adequately remediate, and violations observed at their facilities and compliance actions indefinitely remain open.

B. Inspection Efficiency Enhancements

The Agency has implemented various changes and continues to improve how it conducts inspections to verify pharmaceutical quality; the Agency also has improved transparency and timeliness in determining regulatory outcomes from inspections.[14]

In 2012, with the passage of the Food and Drug Administration Safety and Innovation Act,[15] Congress gave FDA the authority to enter into arrangements with a foreign government or an Agency of a foreign government to recognize foreign inspections after a determination that the foreign government has the capability to conduct inspections in accordance with section 809 of the FD&C Act. FDA currently has mutual recognition agreements (MRAs)[16] with the European Union (EU) and the United Kingdom (UK) that allow drug inspectors to rely upon information from drug inspections conducted within each other's borders. FDA expects to perform fewer routine surveillance inspections in foreign countries with a capable inspectorate. FDA, the EU, and the UK are now

[14] See www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm619435.htm.

[15] www.gpo.gov/fdsys/pkg/PLAW-112publ144/pdf/PLAW-112publ144.pdf.

[16] See www.fda.gov/international-programs/international-arrangements/mutual-recognition-agreement-mra.

implementing these MRAs related to drug quality surveillance inspections. FDA accomplished the agreed-upon goal of making a capability determination for all EU member states and UK inspectorates of human drugs, including biologicals, by July 15, 2019. As a result of that accomplishment and as provided for in the FDA-EU MRA, the EU has stopped sampling and testing U.S.-produced drug batches distributed in the EU.

C. Outreach and Facility Assessment

FDA has completed several commitments under the GDUFA II program to provide greater transparency regarding prioritization and scheduling of inspections, as well as to communicate information following inspections. These efforts include updating FDA's publicly available inspection classifications database, communicating with foreign regulatory authorities regarding the compliance status of establishments, providing information on the Agency's Risk-Based Site Selection Model, and communicating information from inspections that may impact approvability to applicants and facility owners.

As part of this commitment, upon receipt of a request by an establishment physically located in the United States that has been included as part of a marketing application submitted to a foreign regulator, FDA will issue, within 30 days of receipt of the request, a declaration to an identified foreign regulator conveying the current CGMP compliance status for the establishment.

FDA met this goal in FY 2022 by responding within 30 days of receipt to 26 requests for CGMP declarations. (Thirty total requests were received, and four requests did not fit the criteria for issuance.) In addition to CGMP declarations, there are other ways that FDA is enhancing communication and transparency with foreign regulatory authorities regarding the compliance status of establishments in the United States. For example, foreign regulators can also find the CGMP status of an establishment by checking the inspection classifications database for the most recent inspection classification that is publicly available.

The inspection classifications database provides the most recent classifications based on FDA's final assessments following an inspection of manufacturing facilities for routine surveillance purposes or sites conducting BE/bioavailability studies. FDA updates the database every 30 days. Previously, the Agency updated the database every 180 days and did not include inspection classifications of sites conducting clinical BE/bioavailability studies. The Agency also updated the database to build on its progress implementing the MRA with the EU and the UK, and the database now supports inclusion of facility status information based on the classification of inspection reports from foreign regulatory authorities.

VIII. GDUFA II – Enhanced Accountability and Reporting

GDUFA II includes several commitments and requirements that are critical to enabling progress toward performance goals for the human generic drug program. These include developing a resource management plan, implementing a modernized time reporting and resource management system, and publishing monthly and quarterly metrics on FDA's website. This section details the status of these activities.

A. Resource Management Planning and Modernized Time Reporting

FDA committed to conducting activities necessary to fulfill the resource management objectives. FDA has worked diligently to ensure compliance with this undertaking. The following table describes FDA's FY 2018 to FY 2022 commitments and progress in this area.

Table XV. FDA's Progress in Meeting Resource Management Objectives

Activity	Due Date/Deadline	Status
FDA will develop and publish a resource management planning and modernized time reporting implementation plan.	No later than the fourth quarter of FY 2018	FDA published the implementation plan (www.fda.gov/media/112562/download) on March 30, 2018.
FDA will implement methodologies for assessing resource needs of the program and for tracking resource utilization across the program elements.	Following the report review and comments	Methodology implemented.

B. Financial Transparency and Efficiency

FDA also agreed to conduct activities to evaluate the financial administration of the GDUFA program to help identify areas to enhance operational and fiscal efficiency.

Table XVI. FDA's Financial Transparency and Efficiency

Activity	Due Date/Deadline	Status
FDA will contract with an independent third party to obtain an evaluation of how the GDUFA program is resourced and how those resources are utilized and to recommend improvements to the process.		FDA published an "Independent Evaluation of the GDUFA Resource Capacity Planning Adjustment Methodology" (www.fda.gov/media/140656/download) in July 2020.
FDA will use the results of the evaluation to create an ongoing financial reporting mechanism to enhance the transparency of GDUFA program resource utilization.		Implemented.
FDA will publish updates to the GDUFA Five-Year Financial Plan.	No later than the second quarter of each subsequent fiscal year	FDA published the FY 2022 GDUFA Five-Year Financial Plan update (www.fda.gov/about-fda/user-fee-reports/user-fee-five-year-financial-plans) in March 2022.
FDA will convene a public meeting to discuss the GDUFA Five-Year Financial Plan, along with the Agency's progress in implementing modernized time reporting and resource management planning.	No later than the third quarter of each fiscal year starting in FY 2019.	FDA held a public meeting on Financial Transparency and Efficiency of GDUFA in June 2022.

IX. Performance Reporting

In the GDUFA II Commitment Letter, FDA committed to publish monthly and quarterly performance metrics on its website. These metrics can be found at www.fda.gov/industry/generic-drug-user-fee-amendments/enhanced-accountability-reporting.

FDA also committed to publishing more performance metrics in the annual GDUFA Performance Report. These further performance metrics either have already been captured in this report or are captured in the tables below.

The following table summarizes FDA's GDUFA II commitment to promote accountability and transparency by providing the mean and median approval times for generic drug reviews for the FYs 2018-2022 receipt cohorts. These metrics include only applications approved or tentatively approved at the time this report was prepared. In future reports to Congress, these metrics will be revised to include applications that are approved or tentatively approved in subsequent fiscal years. Thus, the current numbers are a measure of both the earliest and fastest submissions reaching approval. The approval times and numbers of cycles will increase with each re-analysis of the cohort. These re-analyses will be presented in future reports to Congress.

Table XVII. Mean and Median Approval Times for Generic Drug Reviews

GDUFA II	FY 2018	FY 2019	FY 2020	FY 2021*	FY 2022
Receipt Cohort					
Mean Approval Time (Calendar Days)	584	511	374	397	283
Median Approval Time (Calendar Days)	522	472	351	387	293
Mean Tentative Approval Time (Calendar Days)	672	598	396	393	--
Median Tentative Approval Time (Calendar Days)	655	595	360	405	--
Mean Number of ANDA Review Cycles to Approval	2	2	2	2	1
Median Number of ANDA Review Cycles to Approval	2	2	1	1	1
Mean Number of ANDA Review Cycles to Tentative Approval	2	2	1	2	--
Median Number of ANDA Review Cycles to Tentative Approval	2	2	1	2	--

* Numbers were changed to reflect updates to the data presented in the FY 2021 GDUFA Performance Report.

FDA also committed to annual reporting on the following information about the workload managed by the generic drug program.

Table XVIII. Additional Workload Managed by the Generic Drug Program

GDUFA II	FY 2018	FY 2019	FY 2020	FY 2021*	FY 2022
Application Receipt					
Number of applications received	1044	909	865	757	702
Number of applications refused to receive	127	52	42	40	44
Average time to receipt decision (i.e., number of calendar days)	49	44	45	42	40
ANDA Review					
Number of ANDA applications received by FDA for standard review	555	569	648	575	521
Number of ANDA applications received by FDA for priority review	405	289	153	183	181
Percentage of ANDA proprietary name requests reviewed within 180 days of receipt	97%	89%	95%	90%	100%
Petitions					
Number of suitability petitions pending a substantive response for more than 270 days from the date of receipt	136	161	172	173	193
Number of petitions to determine whether a listed drug has been voluntarily withdrawn from sale for reasons of safety or effectiveness pending a substantive response for more than 270 days from the date of receipt	0	0	2	5	1
DMF					
Number of DMF First Adequate Letters issued status (or equivalent)	189	198	213	254	318
Email Exchanges					
Number of initial (first cycle) email exchanges requested and conducted in lieu of teleconferences to clarify deficiencies in DMF deficiency letters	56	64	78	66	46
Number of follow-up email exchanges requested and conducted in lieu of teleconferences to clarify deficiencies in follow-up cycle DMF deficiency letters	10	2	15	5	8

* Numbers were changed to reflect updates to the data presented in the FY 2021 GDUFA Performance Report.

Table XIX. GDUFA Management Initiatives

Management Initiative	Performance Area	FY 2018	FY 2019	FY 2020	FY 2021*	FY 2022
When requested by the ANDA applicant within 10 calendar days of FDA issuing a CRL, FDA will schedule a teleconference to provide clarification concerning deficiencies identified in the CRL.[17]	Teleconferences Requested	72	91	66	73	65
	Teleconferences Granted	56	67	55	57	50
	Teleconferences Denied	16	24	11	16	15
	Teleconferences Conducted	56	67	55	57	50
When requested by the ANDA applicant, FDA will schedule a teleconference to clarify issues and answer questions on reclassifying a major amendment or standard review status.	Teleconferences Requested	30	14	12	16	17
	Teleconferences Granted	24	11	12	16	17
	Teleconferences Denied	0	0	0	0	0
	Teleconferences Conducted	24	11	8	15	16
FDA will offer to hold a Mid-Review Cycle teleconference with an applicant if a Product Development or Pre-Submission Meeting has been held.[18]	Teleconferences Offered	1	5	19	23	20
	Teleconferences Scheduled	1	5	19	23	20
	Teleconferences Conducted	1	5	15	14	10
FDA will strive to grant DMF first cycle review deficiency teleconferences	Teleconferences Requested	--	6	5	4	8
	Teleconferences Granted		6	4	0	3
	Teleconferences Denied		0	1	4	5
	Teleconferences Conducted		0	2	0	0

* Numbers were changed to reflect updates to the data presented in the FY 2021 GDUFA Performance Report.

[17] FDA may close out a request for a first cycle CR teleconference by (1) holding the teleconference or (2) responding, in writing, to questions in the applicant's teleconference request in lieu of holding the teleconference.

[18] The GDUFA II Commitment Letter specifies that FDA will publish metrics on the number of "GDUFA related teleconferences requested, granted, denied and conducted," but these terms do not neatly apply to Mid-Review Cycle Meetings. The more applicable terms "offered," "scheduled," and "conducted" are used instead.

X. Rationale for GDUFA Program Changes

FDARA amended the FD&C Act to require the reporting of certain information relating to GDUFA program changes in the annual performance report starting with FY 2020.

Specifically, section 903(c) of FDARA added section 744C(a)(3) of the FD&C Act, which requires that the annual GDUFA performance report include the following:

(A) data, analysis, and discussion of the changes in the number of full-time equivalents hired as agreed upon in the letters described in section 301(b) of GDUFA II and the number of full-time equivalents funded by budget authority at the FDA by each division within CDER, the Center for Biologics Evaluation and Research (CBER), the Office of Regulatory Affairs (ORA), and the Office of the Commissioner (OC);

(B) data, analysis, and discussion of the changes in the fee revenue amounts and costs for human generic drug activities, including identifying drivers of such changes; and

(C) for each of the CDER, CBER, ORA, and OC, the number of employees for whom time reporting is required and the number of employees for whom time reporting is not required.

The information below fulfills these reporting requirements.

A. Changes in the Number of FTEs Hired as Agreed in the GDUFA Commitment Letter and the Number of FTEs Funded by Budget Authority by Division Within CDER, CBER, ORA, and OC.

This section addresses the requirement to provide data, an analysis, and a discussion of the changes in the number of FTEs hired as agreed upon in the letters described in section 301(b) of GDUFA II and the number of FTEs funded by budget authority at FDA by each division within CDER, CBER, ORA, and OC.

1. *Changes in the Number of FTEs Hired*

The GDUFA II Commitment Letter does not specify concrete hiring goals in terms of FTEs. However, in response to this reporting requirement, the Agency is providing the number of FTEs hired to meet the GDUFA II commitments, as indicated in the table below.

Table XX. Number of FTEs Hired to Meet GDUFA II Commitments

Center	Number Hired in FY 2021	Number Hired in FY 2022	Change in Number Hired
CDER	10	1	-9
CBER	0	0	0
OC	0	0	0
ORA	6	15	9
Total	16	16	0

FDA is focused on building staff capacity to manage the increasing program workload, meet performance goals, and deliver on new commitments funded in GDUFA II. The Agency continues to hire as needed to maintain staffing for the GDUFA program given attrition and the resources available to the program.

2. *Changes in the Number of FTEs Funded by Budget Authority by Division Within CDER, CBER, ORA, and OC*

The data in the table below show the change from FY 2021 to FY 2022 in the number of FTEs funded by budget authority at FDA by each division within CDER, CBER, ORA, and OC. This table reflects the number of FTEs funded by budget authority for the GDUFA II program. For purposes of this table, "budget authority" refers to FDA's non-user fee annual appropriations. To address the requirement that information on the number of FTEs funded by budget authority be presented "by each division," the information in this table is broken down to the office level for the Centers, ORA, and OC. FDA uses a 2,080-hour workload to equate to one FTE, and this calculation is reflected in the table below. Data for FY 2022 and the previous year, FY 2021, are presented and compared to show the change in the number of FTEs over the last 2 fiscal years to directly support the GDUFA II program. The number of FTEs funded by budget authority for FY 2021 are those FTEs as of September 30, 2021. The number of FTEs funded by budget authority for FY 2022 are those FTEs as of September 30, 2022.

FDA reported an increase in overall FTEs funded by budget authority in FY 2022 compared to FY 2021. The increase in reported FTEs was attributable to re-baselining of payroll distribution percentages between annual appropriations and GDUFA fees.

Table XXI. Number of FTEs Funded by Budget Authority

Center and Office	Number of GDUFA Program FTEs Funded by Budget Authority*		Change in the Number of GDUFA Program FTEs Funded by Budget Authority
	FY 2021	FY 2022	
CDER			
Office of Communications	6.0	6.4	0.4
Office of Compliance	21.9	24.7	2.8
Office of the Center Director	6.7	4.6	-2.1
Office of Executive Programs	0.4	11.4	11.0
Office of Generic Drugs	7.2	20.6	13.4
Office of Medical Policy	1.6	0.1	-1.5
Office of Management	3.6	9.5	5.9
Office of New Drugs	1.3	1.9	0.6
Office of Pharmaceutical Quality	38.7	52.0	13.3
Office of Regulatory Policy	8.5	6.1	-2.4
Office of Surveillance and Epidemiology	9.3	5.4	-3.9
Office of Strategic Planning	17.8	4.4	-13.4
Office of Information Management and Technology	1.2	0.0	-1.2
Office of Translational Sciences	18.2	10.6	-7.6
Other Offices	1.6	0.2	-1.4
Working Capital Fund (WCF)	30.3	27.3	-3.0
CBER			
Office of Biostatistics and Epidemiology	0.0	0.0	0.0
Office of Blood Research and Review	1.1	1.3	0.2
Office of Compliance and Biologics Quality	0.1	0.3	0.2
Office of Communication Outreach and Development	0.1	0.1	0.0
Office of the Center Director	0.1	0.1	0.0
Office of Management	0.2	0.2	0.0
Office of Information Management and Technology	0.0	0.0	0.0
Office of Tissues and Advanced Therapies	0.0	0.0	0.0
Office of Biostatistics and Pharmacovigilance‡	0.0	0.0	0.0
Office of Regulatory Operations‡‡	0.0	0.0	0.0
WCF	0.1	0.1	0.0
ORA			
Office of Pharmaceutical Quality Operations	8.0	14.0	6.0
WCF	16.2	16.1	-0.1

Center and Office	Number of GDUFA Program FTEs Funded by Budget Authority*		Change in the Number of GDUFA Program FTEs Funded by Budget Authority
	FY 2021	FY 2022	
OC			
OC Immediate Office	0.0	0.2	0.2
Office of the Chief Counsel	0.2	1.2	1.0
Office of the Chief Scientist	0.0	0.0	0.0
Office of Clinical Policy and Programs	0.0	0.0	0.0
Office of External Affairs	0.0	0.2	0.2
Office of Global Policy and Strategy	0.1	0.4	0.3
Office of Operations	0.3	1.5	1.2
Office of Policy, Legislation, and International Affairs	0.1	0.8	0.7
WCF	5.6	5.9	0.3

* This table includes GDUFA program FTE calculated through WCF assessments for certain centrally administered services provided to CDER, CBER, ORA, and OC. Because many employees under OC and WCF do not report time, an average cost per OC and WCF FTE was applied to derive the number of GDUFA program FTEs funded by budget authority.
FTEs are rounded to the 10th decimal. Offices with smaller than 0.1 FTEs are shown as 0.0.
‡ A reorganization in CBER created this new office, which was previously part of the Office of Biostatistics and Epidemiology.
‡‡ A reorganization in CBER created this new office, which was previously part of the Office of the Center Director.

B. Changes in the Fee Revenue Amounts and Costs for the Review Process

Section 744C(a)(3) of the FD&C Act, as added by FDARA section 903(c), also requires that FDA provide data, analysis, and discussion of the changes in the fee revenue amounts and costs for human generic drug activities, including identifying drivers of such changes. Accordingly, the table below provides data for the GDUFA fee revenue amounts and process costs for FY 2021 and FY 2022, and the changes in these amounts from FY 2021 to FY 2022.

In FY 2022, FDA had net collections of $546 million in human generic drug user fees, spent $548 million in user fees for human generic drug activities, and carried a cumulative balance of $131 million forward for future fiscal years. Detailed financial information for the GDUFA user fee program can be found in the FY 2022 GDUFA financial report.

For FY 2018 through FY 2022, the base revenue amounts used in calculating the total GDUFA fee revenues are established by GDUFA II. For FY 2022, the base revenue amount is the FY 2021 inflation adjusted fee revenue amount of $520,208,640. The FY 2022 base revenue amount is then adjusted by inflation, yielding an inflation-adjusted fee revenue amount of $531,367,636. For FY 2022, FDA may, in addition to the inflation adjustment, further increase the fee revenue and fees established if such an adjustment is necessary to provide for not more than 3 months of operating reserves of carryover user fees for human generic drug activities for the first 3 months of FY 2023. FDA made

the final year adjustment to allow for 7 weeks of operating reserves, and the final year adjustment was $8,288,102. Adding this amount to the inflation adjusted amount of $531,367,636 resulted in a total revenue target of $539,656,000 (rounded to the nearest thousand dollars). Actual collections were slightly above the estimated collections in FY 2022.

In FY 2022, GDUFA review process costs were flat compared to FY 2021.

Table XXII. Changes in the Fee Revenue Amounts and Review Process Costs

Fiscal Year	FY 2021	FY 2022	Change from FY 2021 to FY 2022
Fee Revenue Amounts (Net Collections)	$500,205,882	$545,842,834	+9%
Review Process Cost	$681,916,125	$681,402,012	0%

C. Number of Employees for Whom Time Reporting Is Required

Section 744C(a)(3) of the FD&C Act, as added by FDARA section 903(c), also requires that FDA provide for each of the CDER, CBER, ORA, and OC, the number of employees for whom time reporting is required and the number of employees for whom time reporting is not required. Accordingly, the table below provides the number of employees within CDER, CBER, ORA, and OC who are required to report their time and those who are not required to report their time as of September 30, 2022.

These data reflect time reporting across all employees in each entity, rather than only those engaged in GDUFA program activities.

Table XXIII. Time Reporting Requirement for FY 2022

Center	FTEs for Whom Time Reporting Is Required	FTEs for Whom Time Reporting Is Not Required
CDER	5,430	12
CBER	1,232	5
ORA	4,422	280
OC	55	2,632
Total	11,139	2,929

Appendix A: Definitions of Key Terms

A. **Act on an Application** means that FDA will issue a CRL, an approval letter, a TA letter, or an RTR action.

B. **Active pharmaceutical ingredient (API)** means:

(i) a substance, or a mixture when the substance is unstable or cannot be transported on its own, intended to be used as a component of a drug and intended to furnish pharmacological activity or other direct effect in the diagnosis, cure, mitigation, treatment, or prevention of disease, or to affect the structure or any function of the human body; or (ii) a substance intended for final crystallization, purification, or salt formation, or any combination of those activities, to become the final active pharmaceutical ingredient as defined in paragraph (i).

C. **Amendments to an ANDA** – The GDUFA II Commitment Letter reflects significant changes in the classification of review goals for amendments to ANDAs and PASs from the GDUFA I Commitment Letter. Under GDUFA I, amendments were classified into a complex Tier system based on the following factors: whether the amendment was solicited or unsolicited, whether the amendment was major or minor, the number of amendments submitted to the ANDA or PAS, and whether an inspection was necessary to support the information contained in the amendment. GDUFA II simplified the amendment review goals and no longer subjects them into a Tier system; however, GDUFA II review goals are still dependent on whether the amendment is designated as a standard or priority, whether the amendment is classified as major or minor, and whether or not a pre-approval inspection is needed.

Descriptions of major and minor amendments were considered during the GDUFA II negotiations and incorporated in the GDUFA II Commitment Letter. FDA's guidance for industry *ANDA Submissions — Amendments to Abbreviated New Drug Applications Under GDUFA* (July 2018) supersedes FDA's guidance for industry *Major, Minor, and Telephone Amendments to Abbreviated New Drug Applications* (December 2001) and, as agreed to during GDUFA II negotiations, incorporates excerpted text describing major and minor amendment types that are contained in Appendix B of the July 2018 guidance.[19]

[19] See www.fda.gov/regulatory-information/search-fda-guidance-documents. In August 2022, as agreed to during GDUFA III negotiations, FDA issued a *Federal Register* notice, 87 FR 50088 (August 15, 2022), to solicit public comment on the content of Appendix A in the July 2018 *ANDA Submissions — Amendments to Abbreviated New Drug Applications Under GDUFA* guidance for industry, which contains a non-exhaustive list of examples of deficiencies FDA may consider major.

D. **Abbreviated new drug application (ANDA)** is defined as "the application described under [21 CFR] 314.94, including all amendments and supplements to the application." 21 CFR 314.3(b).

E. **Bioequivalence (BE)** is the absence of a significant difference in the rate and extent to which the active ingredient or active moiety in pharmaceutical equivalents or pharmaceutical alternatives becomes available at the site of drug action when administered at the same molar dose under similar conditions in an appropriately designed study.

F. **Complete response letter (CRL)** refers to a written communication to an applicant or DMF holder from FDA usually describing all the deficiencies that the Agency has identified in an ANDA (including pending amendments) or a DMF that must be satisfactorily addressed before the ANDA can be approved. CRLs will reflect a complete review, which includes an application-related facilities assessment and will require a complete response from industry to trigger another review cycle with an attendant goal date. Refer to 21 CFR 314.110 for additional details. When a citizen petition may impact the approvability of the ANDA, FDA will strive to identify, where possible, valid issues raised in a relevant citizen petition in the CRL. If a citizen petition raises an issue that would delay only part of a CR, a response that addresses all other issues will be considered a CR.

G. **Complete review** refers to a full division-level review from all relevant review disciplines, including inspections, and includes other matters relating to the ANDAs and associated DMFs, as well as consults with other Agency components.

H. **Complex controlled correspondence** means:

1. CC involving evaluation of clinical content,

2. BE protocols for reference listed drugs with Risk Evaluation and Mitigation Strategies with Elements to Assure Safe Use, or

3. Requested evaluations of alternative BE approaches within the same study type (e.g., PK, in vitro, clinical).

I. **Complex product** generally includes:

1. Products with complex active ingredients (e.g., peptides, polymeric compounds, complex mixtures of APIs, naturally sourced ingredients); complex formulations (e.g., liposomes, colloids); complex routes of delivery (e.g., locally acting drugs such as dermatological products and complex ophthalmological products and otic dosage forms that are formulated as suspensions, emulsions or gels) or complex dosage forms (e.g., transdermals, metered dose inhalers, extended release injectables);

2. Complex drug-device combination products (e.g., auto injectors, metered dose inhalers); and

3. Other products where complexity or uncertainty concerning the approval pathway or possible alternative approach would benefit from early scientific engagement.

J. **Controlled Correspondence (CC)** is correspondence submitted to the Agency, by or on behalf of a generic drug manufacturer or related industry, requesting information on a specific element of generic drug product development. See CDER's December 2020 guidance for industry *Controlled Correspondence Related to Generic Drug Development*.[20] CC does not include citizen petitions, petitions for reconsideration, or requests for stay.

K. **Discipline review letter (DRL)** means a letter used to convey preliminary thoughts on possible deficiencies found by a discipline reviewer and/or review team for its portion of the pending application.

L. **Facility** is described as a business or other entity under one management, either direct or indirect, and at one geographic location or address, engaged in manufacturing or processing an API or an FDF, but does not include a business or other entity whose only manufacturing or processing activities are one or more of the following: repackaging, relabeling, or testing.

M. **Finished Dosage Form (FDF)** means:

(i) a drug product in the form in which it will be administered to a patient, such as a tablet, capsule, solution, or topical application;

(ii) a drug product in a form in which reconstitution is necessary prior to administration to a patient, such as oral suspensions or lyophilized powders; or

(iii) any combination of an API with another component of a drug product for purposes of production of such a drug product.

N. **GDUFA** – GDUFA I and GDUFA II

O. **GDUFA I** – Generic Drug User Fee Amendments for Fiscal Years 2013 to 2017

P. **GDUFA II** – Generic Drug User Fee Amendments for Fiscal Years 2018 to 2022

Q. **Information Request (IR)** means a letter that is sent to an applicant during a review to request further information or clarification that is needed or would be helpful to allow completion of the discipline review.

R. **Mid-Review Cycle Meeting** – A teleconference meeting with the applicant to discuss current concerns with the application and next steps. CDER schedules this teleconference after the last key discipline has issued its IR and/or DRL for ANDAs

[20] www.fda.gov/regulatory-information/search-fda-guidance-documents.

that were the subject of prior Product Development Meetings or Pre-Submission Meetings.

S. **Original ANDA** – The initial submission of an ANDA to CDER's Office of Generic Drugs or CBER.

T. **Pre-Submission Meeting** means a meeting in which an applicant has an opportunity to discuss and explain the format and content of an ANDA to be submitted. Although the proposed content of the ANDA will be discussed, Pre-Submission Meetings will not include substantive review of summary data or full study reports.

U. **Prior Approval Supplement (PAS)** means a request to the Secretary to approve a change in the drug substance, drug product, production process, quality controls, equipment, or facilities covered by an approved ANDA when that change has a substantial potential to have an adverse effect on the identity, strength, quality, purity, or potency of the drug product as these factors may relate to the safety or effectiveness of the drug product.[21]

V. **Priority** means submissions affirmatively identified as eligible for a priority review per section 505(j)(11)(A) of the FD&C Act or CDER's MAPP 5240.3, *Prioritization of the Review of Original ANDAs, Amendments and Supplements*, as revised.[22]

W. **Product Development Meeting** means a meeting involving a scientific exchange to discuss specific issues (e.g., a proposed study design, alternative approach or additional study expectations) or questions, in which FDA will provide targeted advice regarding an ongoing ANDA development program.

X. **Reference Listed Drug (RLD)** means the listed drug identified by FDA as the drug product upon which an applicant relies in seeking approval of its ANDA.

Y. **Refuse to Receive (RTR)** means refusal to receive an ANDA for review. See 21 CFR 314.101 and the guidance for industry *ANDA Submissions – Refuse-to-Receive Standards* (December 2016).[23]

Z. **Review Status Update** means a response from the regulatory project manager (RPM) to the Authorized Representative to update the Authorized Representative concerning, at a minimum, the categorical status of relevant review disciplines with respect to the submission at that time. A review status update is preliminary only based on the RPM's interpretation of the submission and subject to change at any time.

AA. **Standard controlled correspondence** means controlled correspondence:

---

[21] Section 744A(11) of the FD&C Act.

[22] www.fda.gov/about-fda/center-drug-evaluation-and-research-cder/cder-manual-policies-procedures-mapp.

[23] www.fda.gov/regulatory-information/search-fda-guidance-documents.

1. As described in CDER's December 2020 guidance for industry *Controlled Correspondence Related to Generic Drug Development*[24] or

2. Concerning post-approval submission requirements that are not covered by CDER's post-approval changes guidance and are not specific to an ANDA.

BB. **Submission** refers to an ANDA, an amendment to an ANDA, a PAS to an ANDA, or an amendment to a PAS.

CC. **Submission date** means the date that a generic drug submission or Type II DMF is deemed to be "submitted" pursuant to Section 744B(a)(6) of the FD&C Act, which states that a generic drug submission or Type II DMF is deemed to be "submitted" if it is submitted via an FDA electronic gateway, on the day when transmission to that electronic gateway is completed, except that, when the submission or DMF arrives on a weekend, Federal holiday, or day when the FDA office that will review that submission is not otherwise open for business, the submission shall be deemed to be submitted on the next day when that office is open for business. In section 745A(a) of the FD&C Act, Congress granted explicit authorization to FDA to implement the statutory electronic submission requirements in guidance. Refer to the guidance for industry *Providing Regulatory Submissions in Electronic Format – Certain Human Pharmaceutical Product Applications and Related Submissions Using the eCTD Specifications* (February 2020).[25]

DD. **Tentative Approval (TA) Letter** - If a generic drug product is ready for approval but cannot be approved because of a patent or exclusivity related to the RLD product, FDA issues a TA letter to the applicant, and the TA letter details the basis for the TA. FDA will not issue final approval of the generic drug product until all patent or exclusivity issues have been resolved or, in some cases, until a 30-month stay associated with patent litigation has expired. A TA does not allow the applicant to market the generic drug product.

EE. **Type II API Drug Master File (DMF)** - A submission of information to FDA concerning the manufacture of a pharmaceutical active ingredient by a person that intends to authorize FDA to reference the information to support approval of a generic drug submission without the submitter having to disclose the information to the generic drug submission applicant.

[24] Ibid.

[25] Ibid.

Appendix B: Significant FY 2022 GDUFA Science and Research Accomplishments

Significant FY 2022 GDUFA science and research accomplishments are highlighted below with a key FY 2022 outcome for each of the 13 research programs:

- **ABUSE-DETERRENT OPIOID DRUG PRODUCTS**

  Among several research initiatives during FY 2022 related to abuse-deterrent formulations (ADFs) of opioid drug products, some notable outcomes were related to the development of PBPK models for morphine sulfate and naltrexone hydrochloride. The results of these PBPK models were validated against corresponding literature data for these drugs from a nasal insufflation clinical study with crushed extended-release capsules containing a fixed combination of morphine sulfate and naltrexone hydrochloride. The validated PBPK models were used to investigate the effect of different drug PSDs between 100 and 500 µm on in vivo systemic PK parameters, and the models predicted that the PK would be dependent on the PSD of morphine sulfate, but not that of naltrexone hydrochloride. In addition, the models were able to indicate the relative proportion of a drug dose that may be absorbed via the nasal mucosa versus via the oral route (through deposition of particles in the stomach by mucociliary clearance) when such ADFs are manipulated after nasal insufflation. These research outcomes illustrate how valuable such in silico modeling tools can be during generic drug development to inform the design of ADFs of opioid drug products.

- **COMPLEX INJECTABLES, FORMULATIONS, AND NANOMATERIALS**

  In FY 2022, GDUFA research related to complex injectables, formulations, and nanomaterials included not only the development of new analytical characterizations and IVRT methods but also the advancement of an in silico systems-based multiscale model to capture the various biological and physicochemical events that affect the transport and residence of nanoparticles and associated drug among different extracellular and intracellular compartments. Among the outcomes from this work, research with phytonadione injection established that potential differences in the source of a surfactant may not impact critical formulation characteristics and behavior during preparation, but the formulation composition or the manufacturing process parameters can produce products with a different initial dispersion state. These outcomes helped establish the types of characterizations, including relatively routine tests for appearance (turbidity) and PSD that can distinguish microemulsions from nanoemulsions, that may be appropriate to support a demonstration of BE for such products.

- **COMPLEX MIXTURES AND PEPTIDE PRODUCTS**

  Research related to the characterization of complex mixtures and peptide products during FY 2022 focused on detecting, identifying, and quantifying impurities in peptide and oligonucleotide products. Even trace amounts of certain impurities have the potential to pose health risks to patients due to their potential carcinogenic or immunogenic effects. An outcome of this research included the development of a liquid chromatography-high resolution mass spectrometry method to identify and quantitate impurities in liraglutide products, which could arise from the manufacturing and purification processes utilized for a prospective generic product. Parallel research to develop in silico tools during FY 2022 included the evaluation of a "What If Machine" to assess the immunogenic potential of peptide impurities that may be generated during peptide synthesis, optimizing a tool that provides insights to support efficient non-clinical methods that evaluate the immunogenicity risks associated with these complex generics.

- **DATA ANALYTICS**

  In FY 2022, data analytics research contributed to advances in AI technologies, such as ML and natural language processing, that can facilitate generic drug development and regulatory assessments. For example, a tool was recently developed to automate the collection and structured assembly of data submitted in ANDAs, which streamlines work during the BE assessment process that is otherwise very labor intensive. During FY 2022, this tool was integrated with other components of FDA's information technology infrastructure to facilitate efficient and high-quality regulatory assessments. Research in this area also developed novel approaches to data analysis for bioassays and in vitro tests, supported the assessment of API sameness, enabled sample size estimation, and facilitated missing data handling. In addition, outcomes from this research have enabled improvements in FDA's internal processes for responding to industry requests, such as the development of PSGs. These research outcomes ensure that regulatory recommendations and decisions continue to be supported by the most current scientific thinking and utilize modern technologies to optimize the efficiency with which public needs are met.

- **DRUG-DEVICE COMBINATION PRODUCTS**

  The research relating to drug-device combination products (DDCPs) during FY 2022 focused on understanding patient and caregiver perceptions, analyzing the

user interface considerations, and developing in vitro techniques to assist in the creation and evaluation of complex DDCPs. This work included surveying focus groups composed of patients who use dry powder inhalers (DPIs), which revealed that their positive feelings about financial savings with generic DDCPs were mixed with some anxiety arising from an uncertainty about how to use the generic DPI device and about whether the generic DPI would perform as well as the brand name product. One of the key outcomes from this research was the development of improved strategies to identify and analyze DDCP user interface differences that may impact the substitutability of a generic for its brand name product. These research outcomes are elucidating how patients use generic versus brand name DDCPs and are thereby supporting the development of substitutable generic DDCPs that can enhance patient access to these critical medicines.

- **INHALATION AND NASAL DRUG PRODUCTS**

  There were multiple notable research outcomes during FY 2022 that elucidated how in vitro tools such as mouth-throat models, in silico methods combining CFD with PBPK models, and in vivo systemic PK studies can be sensitive to performance differences for inhalation and nasal products. For example, two mometasone furoate nasal suspension formulations with different drug substance PSDs were developed and evaluated in vitro by dissolution testing and morphology-directed Raman spectroscopy, as well as in vivo, in a crossover PK study. Subjects in the in vivo PK study showed significantly higher nasal absorption from a formulation-designated MF-1 (compared to MF-2); this outcome agreed with the results obtained from the spectroscopy and dissolution tests that suggested particle size was a significant contributor to the higher in vivo absorption observed with the MF-1 nasal suspension. The concordance and sensitivity of these efficient in vitro and in vivo assessments suggest that they may be able to support a demonstration of BE by evaluating the potential for differences in product characteristics such as PSD to alter the in vivo bioavailability of drugs in nasal suspensions.

- **LOCALLY ACTING PBPK MODELING**

  In FY 2022, numerous research initiatives related to locally acting PBPK modeling produced outcomes that have the potential to support efficient BE approaches for orally inhaled and nasal products, ophthalmic products, and topical dermatological products, and vaginal products. For example, CFD and discrete element method approaches were able to model how modifications in the device constituent of a DPI could alter the average slip velocity between air and carrier particles to influence the quality of aerosolization, which may be useful for predicting the influence of DPI device changes during product development. Similarly, for

ophthalmic products, PBPK models that were developed to simulate nasolacrimal drainage, ocular absorption, and distribution in the rabbit eye were validated and subsequently extrapolated to human models (by considering the interspecies differences in anatomy and physiology) to predict ocular exposure in humans. In addition, a notable outcome of multiple coordinated research projects on topical dermatological products was the development of in silico tools to simulate the results of an IVPT. These simulation tools could accelerate IVPT method development and facilitate more efficient optimization of IVPT study designs.

- **LONG-ACTING INJECTABLE, INSERTED, AND IMPLANTED PRODUCTS**

  Research during FY 2022 related to LAI products continued to evaluate novel methods to characterize complex polymeric excipients. This research included assessing the potential of three-dimensional (3D) focused ion beam scanning electron microscopy (FIB-SEM) and AI-based image analysis to characterize the microstructure of polylactide-co-glycolide microspheres containing minocycline hydrochloride. The FIB-SEM images were stacked to construct 3D models that could accurately predict drug release, as validated with IVRT experiments. These research outcomes not only elucidated the impact of processing parameters on the quality and performance of these polylactide-co-glycolide based products but also provided a compelling demonstration of the power of AI-based imaging analysis to correlate formulation and manufacturing parameters (1) with the resulting microstructure of polymeric microparticles and (2) with the drug-release characteristics of these products.

- **OPHTHALMIC DRUG PRODUCTS**

  In FY 2022, FDA approved the first generic cyclosporine ophthalmic emulsion product as a direct outcome of several years of GDUFA-funded research that systematically advanced scientific insights and developed new tools to support an efficient demonstration of BE for this complex generic ophthalmic product. In vitro, ex vivo, and in vivo (animal) research in this area continued during FY 2022, which focused on elucidating how the physicochemical properties of ophthalmic emulsion and suspension formulations affect the ocular tear film properties and local tissue in vivo absorption. The insights gleaned from this research are being used (1) to develop and validate PBPK models that combine physics-based and compartmental approaches to predict bioavailability to eye tissues and (2) to establish relevant parameters based on which prospective generic products can support a demonstration of BE.

- **ORAL ABSORPTION MODELS AND BE**

  During FY 2022, research involving oral absorption models and BE investigated the clinical significance of in vitro results for BCS Class II and Class III drugs to facilitate more opportunities for potential biowaiver approaches for these drug products. This research involved developing best practices and validating a framework for PBPK analysis in support of model-informed biowaivers of fed state BE studies for BCS Class II drugs. A key outcome of this research was an enhanced mechanistic understanding of the supersaturation and precipitation behavior of poorly water-soluble compounds that should improve predictions of in vivo performance for drug products with amorphous solid dispersions. Specifically, the research results demonstrated that since the driving force for passive diffusion through the intestinal membrane is proportional to the concentration of the uncharged molecule, the supersaturation ratio can indicate the potential improvement in the absorption rate. These insights establish a valuable foundation for understanding the impact of biologically relevant media on the solution phase behavior of poorly soluble drugs, which can facilitate the development of prospective generic drug products that use amorphous solid dispersions.

- **PATIENT SUBSTITUTION OF GENERIC DRUGS**

  Recent research on the effects of patients transitioning from a brand name levothyroxine product to a corresponding generic levothyroxine product showed that, based on the proportion of patients with normal versus markedly abnormal thyroid stimulating hormone (TSH) levels, there was no clinically significant difference between the two products. Continuing research during FY 2022 assessed the effects of patients switching from one generic levothyroxine product to another generic supplier of that levothyroxine product. Among 2,780 patients in the data set who switched between generic levothyroxine products, and 2,780 corresponding propensity-matched (1:1) non-switcher patient pairs, the proportion of patients with a normal TSH concentration after the index date was 82.7% among non-switchers versus 84.5% among switchers (risk difference: -0.018; 95% CI: -0.038 to 0.002; P=0.07). The proportion of patients with a markedly abnormal TSH concentration after the index date was 3.1% among non-switchers and 2.5% among switchers (risk difference: 0.007; 95% CI: -0.002 to 0.015; P=0.14). The outcomes of this research suggest that switching between different generic levothyroxine products was not associated with clinically significant changes in patients' TSH concentration, providing real-world evidence to support public confidence in the equivalence of these generic narrow therapeutic index drugs.

- **QUANTITATIVE CLINICAL PHARMACOLOGY**

  Research in FY 2022 developed innovative quantitative clinical pharmacology (QCP) approaches to optimize the design and assessment of challenging studies, such as those that necessitate relatively short durations, small sample sizes, or sparse sampling and which may be unfeasible to conduct. A notable outcome of this research was the development of mechanistic models for dermatological and orally inhaled drug products that were made publicly available within the Open Systems Pharmacology Suite. This open-source platform integrates QCP modeling and simulation tools in one place to generate BE evidence in silico, which has the potential to reduce or replace in vivo BE studies for complex locally acting drug products, ultimately improving the efficiency with which these generic products can be developed. Another notable research outcome was the development of a model-based BE analysis framework to support the assessment of sparse PK sampling data for ophthalmic drugs, for which BE studies are typically conducted in patients using a parallel design with one sample of aqueous humor collected in one eye. These innovative QCP approaches may resolve fundamental study feasibility challenges that have otherwise hampered the development of generic drug products.

- **TOPICAL PRODUCTS**

  Research during FY 2022 expanded the development of in vitro tools to support efficient BE approaches for locally acting products administered topically via routes other than the skin, such as rectal suppositories or vaginal gels and creams. Specifically, research with clindamycin phosphate vaginal creams demonstrated that procedures recommended to validate IVRT methods for semisolid topical dermatological products could be successfully adapted and utilized to establish precise and discriminating IVRT methods for these vaginal creams. Furthermore, IVPT methods for topical dermatological products were also successfully adapted and utilized for these vaginal drug products by mounting excised porcine vaginal tissues in a vertical diffusion cell with a receptor solution comprised of simulated vaginal fluid. The resulting IVPT flux profiles for a commercially available 2 percent clindamycin phosphate vaginal cream demonstrated good reproducibility and precision among tissue replicates and was able to differentiate the flux profiles from laboratory-made formulations of different strengths when compared in the same donor. These research outcomes suggest that it may be feasible to utilize efficient BE approaches similar to those developed for topical dermatological products to support the expansion of such characterization-based BE approaches to other locally acting semisolid drug products.

Appendix C: FY 2023 GDUFA Science and Research Priority Initiatives

Consistent with FDA's commitment reflected in the GDUFA Reauthorization Performance Goals and Program Enhancements Fiscal Years 2018-2022 (GDUFA II Commitment Letter),[26] FDA held a public workshop on May 9 to 10, 2022, to obtain input on GDUFA science and research priorities.

FDA relied upon this public input, in part, to identify science and research priorities that can help expand and accelerate patient access to generic drug products. FDA considered the public input, along with comments provided in the workshop discussions, and comments submitted to the docket. This feedback, collectively, contributed to the development of eight priority areas for the next 5 years of the GDUFA science and research program.

These eight areas encompass scientific challenges that the generic industry and FDA's generic drug program identify as being significant over the next 5 years, and they also represent opportunities for scientific advances to accelerate access to generic versions of complex products and make the development of generic drugs more efficient and globally harmonized. Scientific advancements in these areas would maximize the use of the generic drug process to supply needed medications and continue to modernize the generic drug program through use of advances in data science and models in application assessments.

Specific research priorities for FY 2023 were identified within each of the eight research areas enumerated below. The numbering of the eight research areas does not reflect any relative prioritization among the research areas.

1. **Develop Methods for Generics to Address Impurities such as Nitrosamines**

   This research area focuses on (1) understanding how ingredients in drug products may either contribute to or mitigate the formation of potentially harmful impurities such as nitrosamine adducts (e.g., nitrosamine drug substance related impurities (NDSRIs)), (2) evaluating the risk of human exposure to these impurities, and (3) developing methods for ANDA applicants to efficiently address these potential risks.

   FY 2023 science and research priorities specifically include:

[26] https://www.fda.gov/media/101052/download.

A. Evaluating practical strategies that may mitigate the potential risks of harmful impurities such as nitrosamine adducts (e.g., NDSRIs) without impacting the BE or quality of a generic product

B. Developing analytical methods, as well as approaches using orthogonal methods, for the identification and quantitation of nitrosating species in ingredients, including considerations for the distribution of nitrosating species in an ingredient or drug product

C. Characterizing the reactivity of different amines (e.g., secondary versus tertiary amines) to support risk assessments that consider the potential for endogenous nitrosation

D. Improving in vitro, in silico, or in vivo (animal) models to predict the risk of differences in impurities between a prospective generic product and its RLD

E. Estimating acceptable intake amounts for impurities such as nitrosamine adducts (e.g., NDSRIs) using certain mutagenicity evaluations or quantitative structure activity relationship modeling

2. Enhance the Efficiency of BE Approaches for Complex Active Ingredients

This research area focuses on improving advanced orthogonal methods for the characterization of chemical compositions, molecular structures, and distributions of complex active ingredients that can elucidate attributes of complex active ingredients that may be critical to their performance and, thereby, support the development of efficient characterization-based BE approaches.

FY 2023 science and research priorities specifically include:

A. Improving methods for characterizing the sameness of peptide or oligonucleotide active ingredients and the formation of associated impurities

B. Improving methods for assessing the immunogenicity of peptide or oligonucleotide products and associated impurities

3. Enhance the Efficiency of BE Approaches for Complex Dosage Forms and Formulations

This research area focuses on improving efficient characterization-based (in vitro) BE approaches for complex dosage forms by identifying relevant critical product quality attributes to characterize and suitable test methods for doing so.

FY 2023 science and research priorities specifically include:

A. Elucidating drug release mechanisms, critical quality attributes, and characterization test methods for LAI products with the goal of predicting in vivo performance

B. Improving characterization tools for polymeric ingredients and related complex formulations to support assessments of qualitative sameness

4. Enhance the Efficiency of BE Approaches for Complex Routes of Delivery

This research area focuses on (1) understanding how ingredients and other aspects of a formulation influence drug absorption via complex routes of delivery, (2) building in vivo predictive models, and (3) identifying corresponding failure modes for BE, to support the development of efficient BE approaches for these products.

FY 2023 science and research priorities specifically include:

A. Implementing characterization-based (in vitro) methods, potentially together with in vivo PK and modeling methods, as alternatives to the use of comparative clinical endpoint BE studies for nasal and inhaled drug products

B. Developing efficient BE methods for topical drug products (applied to skin or other areas for local action) that may contain compositional differences relative to the reference standard

C. Improving comparative IVPT and in vivo cutaneous PK-based study designs and data analysis techniques that help to resolve practical challenges with implementing these methodologies to support a demonstration of BE for topical drug products

5. Enhance the Efficiency of BE Approaches for Complex Drug-Device Combination Products

This research area focuses on evaluating the impact of identified differences in the user-interfaces, hardware, software, or propellants between prospective generic drugs and the reference listed drug on the BE, therapeutic equivalence, or post-marketing safety of generic drug-device combination products.

FY 2023 science and research priorities specifically include:

A. Improving data analysis approaches for assessing comparative task analysis and comparative use human factors study results

B. Developing improved criteria for comparative device performance assessments that would support a demonstration of BE by in vitro methods (e.g., predictive

adhesion performance of transdermal delivery systems) to eliminate the need for certain in vivo studies

C. Developing efficient approaches to support transitions by generic products to utilize more environmentally friendly propellants

6. Improve the Efficiency of BE Approaches for Oral and Parenteral Generic Products

This research area focuses on (1) understanding how ingredients in oral and parenteral drug products may modulate bioavailability and (2) improving biorelevant dissolution methods as well as in silico models to support both the expansion of biowaivers and global harmonization. This research includes developing evidence to support the feasibility of biowaivers for either immediate release oral drug products with differences in formulations larger than currently recommended in FDA guidance or immediate release oral drug products that do not demonstrate comparable dissolution profiles across strengths. This research also includes establishing approaches to manage potential risks related to subject safety more consistently when developing clinical BE study recommendations and elucidating potential failure modes for BE with special populations (e.g., pediatric or geriatric patients) to improve tools and methodologies that can be incorporated into BE study recommendations, thereby helping ensure the equivalence of therapeutic outcomes in diverse populations.

FY 2023 science and research priorities specifically include:

A. Utilizing PBPK modeling to identify risk factors for food effects and formulation-dependent drug interactions for orally administered products to support global harmonization of the most efficient BE approaches for these products

B. Elucidating how ingredients commonly used to modify drug release in orally administered modified release products function, which will facilitate the implementation of risk-based approaches to support biowaivers for modified release products and identify BE considerations for special patient populations

C. Developing evidence to not only support the feasibility of efficient BE methods for parenteral drug products that may contain compositional differences relative to the RLD but also support global harmonization of the most efficient BE approaches for these products

7. Facilitate the Utility of MIE to Support Demonstrations of BE

This research area focuses on developing tools and advancing approaches to integrate complementary in silico (modeling), in vivo, and in vitro evidence in ways that collectively mitigate the risk of failure modes for BE and support a framework for virtual BE studies. For example, although it may not be feasible to adequately

characterize the long-term bioavailability of drugs from LAI products using in vivo or in vitro methods alone, it may be feasible to integrate limited in vivo and in vitro data with PBPK models that generate the remaining evidence needed to support a demonstration of BE. This research uses MIE to evaluate failure modes for BE and to optimize the design of BE studies.

FY 2023 science and research priorities specifically include:

A. Advancing complementary approaches using MIE to support a demonstration of BE specifically for inhalation and topical routes of delivery as well as for LAI products
B. Establishing best practices for model standardization, validation, acceptance, and sharing (e.g., using model master files) that improve the reproducibility and reusability of quantitative pharmacology information used in BE study simulations

8. <u>Expand the Use of AI and ML Tools</u>

This research area focuses on building systems and infrastructure that support the functionality of AI/ML tools that FDA can use to improve the efficiency and consistency of scientific assessments and advice. This research includes using AI/ML tools such as natural language processing that automate the assembly of key information routinely assessed during the development of recommendations in PSGs, or during the assessment of ANDAs, as well as AI/ML tools that facilitate planning and resource allocation to support GDUFA commitments.

FY 2023 science and research priorities specifically include:

A. Improving the use of real-world evidence for post-market surveillance of generic drug substitution and for evaluating the impact of generic drugs on public health
B. Integrating AI/ML tools with information and data available to FDA and identifying strategies to optimize the reliability of outcomes produced by these tools
C. Exploring the capability of AI/ML tools to enable a prospective applicant to efficiently assess the completeness of its ANDA prior to submission, and to enhance the efficiency, consistency, and quality of FDA's regulatory assessments once ANDAs are submitted

Appendix D: Analysis of Use of Funds

On August 18, 2017, FDARA (Pub. L. 115-52) was signed into law. FDARA amends the FD&C Act to revise and extend the user fee programs for human drugs, biologics, generic drugs, medical devices, and biosimilar biological products.

The FDARA amendments to the FD&C Act require that the annual performance reports of each of the human medical product user fee programs contain specified analyses of the use of funds. These analyses include information such as differences between aggregate numbers of submissions and certain decisions, an analysis of performance goals, a determination of causes affecting the ability to meet goals, and the issuance of corrective action reports.

Section 744C(a)(4) of the FD&C Act, as added by section 904(c)(1) of FDARA, requires that the analysis of the use of funds include information on (1) the difference between aggregate numbers of ANDAs filed and certain types of decisions, (2) an analysis of performance enhancement goals, and (3) a determination of causes affecting the ability to meet goals.

A. Aggregate Number of ANDAs Received and Certain Types of Decisions

Although the mandate is to report the number of ANDAs filed, the term "received" is used instead of "filed" in the statute with respect to ANDAs. FDA will thus report on the aggregate number of ANDAs received. Per 21 CFR 314.101(b)(1), an ANDA will be reviewed after it is submitted to determine whether the ANDA can be "received." "Receipt of an ANDA" means that FDA made a threshold determination that the ANDA is substantially complete. A "substantially complete ANDA" is an ANDA that on its face is sufficiently complete to permit a substantive review. "Sufficiently complete" means that the ANDA contains all the information required under section 505(j)(2)(A) of the FD&C Act and does not contain a deficiency described in 21 CFR 314.101(d) and (e). The number of ANDAs received in the tables below do not account for submissions that were determined to not be substantially complete.

Table D-I. FY 2021 Final Performance by Goal Type

Goal Type FY 2021 Final Performance	Review Goal	Received	Received with Goal Post FY 2021	Approved	Tentatively Approved	Complete Response	Missed Goal*	Percent on Time	Potential Range
I. Original ANDA Review Goals									
Standard Original ANDA Applications	10 months	575	535	83	10	452	22	96%	93% to 96%
Priority Original ANDA Applications (if applicant meets requirements of a PFC)	8 months	37	28	5	0	31	2	95%	95% to 95%
Priority Original ANDA Applications (if applicant does not meet the requirements of a PFC)	10 months	146	138	41	2	98	10	93%	91% to 93%
II. Amendment Review Goals									
Standard Major ANDA Amendments (if pre-approval inspection is not required)	8 months	977	656	123	37	810	40	96%	96% to 96%
Standard Major ANDA Amendments (if pre-approval inspection is required)	10 months	54	51	8	2	35	13	76%	76% to 76%
Priority Major ANDA Amendments (if pre-approval inspection is not required)	6 months	148	78	28	1	119	6	96%	96% to 96%
Priority Major ANDA Amendments (if pre-approval inspection is required and applicant meets the requirements of a PFC)	8 months	1	1	0	0	1	0	100%	100% to 100%
Priority Major ANDA Amendments (if pre-approval inspection is required and applicant does not meet the requirements of a PFC)	10 months	8	8	3	0	5	0	--	100% to 100%
Standard and Priority Minor ANDA Amendments	3 months	718	206	358	104	253	79	89%	89% to 89%

* Missed Goals include submissions that have not had an action and have passed the goal date.

† These percentages include RTR actions, withdrawn submissions, and pending submissions, in addition to approval, TA, and CR actions.

Table D-II. FY 2022 Preliminary Performance by Goal Type

Goal Type FY 2022 Preliminary Performance	Review Goal	Received	Received with Goal Post FY 2022	Approved	Tentatively Approved	Complete Response	Missed Goal*	Percent on Time	Potential Range
I. Original ANDA Review Goals									
Standard Original ANDA Applications	10 months	520	475	3	0	53	1	99%	16% to 100%
Priority Original ANDA Applications (if applicant meets requirements of a PFC)	8 months	39	26	1	0	13	0	100%	42% to 100%
Priority Original ANDA Applications (if applicant does not meet the requirements of a PFC)	10 months	142	131	5	0	17	0	100%	19% to 100%
II. Amendment Review Goals									
Standard Major ANDA Amendments (if pre-approval inspection is not required)	8 months	799	537	39	4	228	16	94%	33% to 98%
Standard Major ANDA Amendments (if pre-approval inspection is required)	10 months	61	56	1	0	4	0	100%	10% to 100%
Priority Major ANDA Amendments (if pre-approval inspection is not required)	6 months	123	62	9	1	51	3	95%	48% to 98%
Priority Major ANDA Amendments (if pre-approval inspection is required and applicant meets the requirements of a PFC)	8 months	--	--	--	--	--	--	--	--
Priority Major ANDA Amendments (if pre-approval inspection is required and applicant does not meet the requirements of a PFC)	10 months	12	10	0	0	2	0	100%	17% to 100%
Standard and Priority Minor ANDA Amendments	3 months	803	223	318	79	189	92	85%	63% to 89%

* Missed Goals include submissions that have not had an action and have passed the goal date.

† These percentages include Refuse to Receive actions, Withdrawn submissions, and Pending submissions, in addition to Approval, TA, and CR actions.

B. Performance Enhancement Goals Met

The following table addresses section 744C(a)(4) of the FD&C Act (as added by section 904(c)(1) of FDARA), pertaining to GDUFA, which requires FDA to include relevant data to determine whether CDER and CBER have met performance enhancement goals identified in the letter described in section 301(b) of GDUFA II (i.e., currently the GDUFA II Commitment Letter) for the applicable fiscal year.

For purposes of this report, “performance enhancement goals” are defined as any non-review goal described in the GDUFA II Commitment Letter with a specified goal date that falls within the applicable fiscal year.

Table D-III. FY 2022 Performance Enhancement Goals

Performance Enhancement Goal	Target Goal Date	On Time (Y/N)	Actual Completion Date	Comments
Update the Inactive Ingredient Database on an ongoing basis and post quarterly notice of updates made.	Quarterly	Y	Quarterly	www.fda.gov/drugs/drug-approvals-and-databases/most-recent-changes-iid-database
Conduct a public workshop to solicit input from industry and stakeholders for inclusion in an annual list of GDUFA II Regulatory Science initiatives.	Annually	Y	Public Workshop held 5/9/2022 – 5/10/2022	https://www.fda.gov/drugs/news-events-human-drugs/fy-2022-generic-drug-science-and-research-initiatives-public-workshop-05092022
Hold meetings between FDA and industry's GDUFA II regulatory science working group.	Biannually	Y	First Meeting held 3/23/2022 Second Meeting held 8/12/2022	www.fda.gov/drugs/generic-drugs/generic-drugs-priorities-projects
Report on its website the extent to which GDUFA regulatory science-funded projects support the development of generic drug products, the generation of evidence needed to support the efficient review and timely approval of ANDAs, and the evaluation of generic drug equivalence.	Annually	Y	Posted 08/29/2022	https://www.fda.gov/drugs/generic-drugs/gdufa-science-and-research-outcomes-fiscal-year-2021
Issue PSGs identifying the methodology for developing drugs and generating evidence needed to support ANDA approval for 90 percent of new chemical entity New Drug Applications that are approved on or after October 1, 2017, at least 2 years prior to the earliest lawful ANDA filing date.	At least 2 years prior to the earliest lawful ANDA filing date.	Y	Annual	In FY 2020, 35 non-complex new chemical entity New Drug Applications were approved. In FY 2022, FDA has issued PSGs for all these 35 non-complex new chemical entities 2 years prior to the earliest lawful ANDA filing date (www.accessdata.fda.gov/scripts/cder/psg/index.cfm)
Publish monthly reporting metrics set forth under section VI(C)(1)(a) through (d) of the GDUFA II Commitment Letter.	Monthly	Y	Monthly	FDA posted these monthly metrics at www.fda.gov/drugs/abbreviated-new-drug-application-anda/generic-drugs-program-activities-report-monthly-performance

Performance Enhancement Goal	Target Goal Date	On Time (Y/N)	Actual Completion Date	Comments
Publish quarterly reporting metrics set forth under section VI(C)(2)(a) through (d) of the GDUFA II Commitment Letter	Quarterly	Y	Quarterly	FDA posted these quarterly metrics at www.fda.gov/industry/generic-drug-user-fee-amendments/activities-report-generic-drugs-program-gdufa-ii-quarterly-performance
Publish annual reporting metrics set forth under section VI(C)(3)(a) through (p) of the GDUFA II Commitment Letter	Annually	Y	Annual	Please see the Performance Reporting section of the FY 2022 GDUFA Performance Report
Publish updates to the GDUFA Five-Year Financial Plan no later than the second quarter of each subsequent fiscal year	3/31/2022	Y	3/30/2022	FDA published the FY 2022 GDUFA Five-Year Financial Plan update in March 2022 (https://www.fda.gov/media/157298/download)
Convene a public meeting no later than the third quarter of each fiscal year starting in FY 2019 to discuss the GDUFA Five-Year Financial Plan, along with the Agency's progress in implementing modernized time reporting and resource management planning	6/30/2022	Y	6/7/2022	FDA held the public meeting (Financial Transparency and Efficiency of GDUFA) in June 2022 to discuss the GDUFA Five-Year Financial Plan (https://www.fda.gov/drugs/news-events-human-drugs/2022-financial-transparency-and-efficiency-prescription-drug-user-fee-act-biosimilar-user-fee-act)

C. Common Causes and Trends Impacting Ability to Meet Goals

This section addresses section 744C(a)(4) of the FD&C Act (as added by section 904(c)(1) of FDARA), pertaining to GDUFA, which requires FDA to identify the most common causes and trends for external or other circumstances affecting the ability of FDA to meet the review time and performance enhancement goals identified in the GDUFA II Commitment Letter.

In addition to the causes and trends initially identified in last year's report, the table below represents FDA's FY 2021 updated performance results.

Table D-IV. FY 2021 Updated Performance Results

Cause or Trend	Impact on FDA's Ability to Meet Goals
Review Goals	In last year's report, the Agency could not fully report on this category in the Appendix because some submissions received in FY 2021 had associated review goals that fell within the subsequent fiscal year (i.e., in FY 2022). As promised in last year's report, the Agency is now able to fulfill the commitment to fully report its performance review goals. FDA did not meet the FY 2021 review goals for Standard Major ANDA Amendments (if PAI is required), Standard PAS (if PAI is required), Priority PAS (if PAI is required and applicant meets the requirements of a PFC), and Standard Major PAS (if PAI is required). These FY 2021 review goals were affected by travel restrictions related to the COVID-19 public health emergency and its impact on FDA's inspections.
Review Program Enhancement Goals	In last year's report, the Agency could not fully report on this category in the Appendix because some submissions received in FY 2021 had associated review goals that fell within the subsequent fiscal year (i.e., in FY 2022). As promised in last year's report, the Agency is now able to fulfill the commitment to fully report its performance review goals. FDA met the FY 2021 review program enhancement goals.
Pre-ANDA Program Goals	In last year's report, the Agency could not fully report on this category in the Appendix because some submissions received in FY 2021 had associated review goals that fell within the subsequent fiscal year (i.e., in FY 2022). As promised in last year's report, the Agency is now able to fulfill the commitment to fully report its performance review goals. FDA met the FY 2021 pre-ANDA program goals.

The table below represents FDA's FY 2022 preliminary performance results.

Table D-V. FY 2022 Preliminary Performance Results

Cause or Trend	Impact on FDA's Ability to Meet Goals
Review Goals	The Agency is aware that it has missed some review goals, but because some submissions received in FY 2022 have associated review goals that fall within the subsequent fiscal year (i.e., in FY 2023), FDA cannot yet evaluate the entire performance for FY 2022 review goals. FDA will provide a full evaluation next year.
Review Program Enhancement Goals	The Agency is aware that it has missed some review goals, but because some submissions received in FY 2022 have associated review program enhancement goals that fall within the subsequent fiscal year (i.e., in FY 2023), FDA cannot yet evaluate the entire performance for FY 2022 review program enhancement goals. FDA will provide a full evaluation next year.
Pre-ANDA Program Goals	Some submissions received in FY 2022 have associated pre-ANDA program goals that fall within the subsequent fiscal year (i.e., in FY 2023). Because FDA cannot yet evaluate the entire performance for FY 2022 pre-ANDA program goals, FDA will provide a full evaluation next year.

Appendix E: FY 2022 Corrective Action Report

On August 18, 2017, FDARA (Pub. L. 115-52) was signed into law. FDARA amends the FD&C Act to revise and extend the user fee programs for human drugs, biologics, medical devices, and biosimilar biological products, and for other purposes. Under section 744C(c) of the FD&C Act (as added by section 904(c)(2) of FDARA), FDA is required to issue a corrective action report that details FDA's performance in meeting the review and performance enhancement goals identified in the letter described in section 301(b) of GDUFA II (i.e., the GDUFA II Commitment Letter) for the applicable fiscal year.

If the Secretary determines, based on the analysis presented in the GDUFA Annual Performance Report, that each of the review and performance enhancement goals for the applicable fiscal year have been met, the corrective action report shall include recommendations on ways in which the Secretary can improve and streamline the human drug application process.[27]

For any of the review and performance enhancement goals during the applicable fiscal year that were not met, the corrective action report shall include a justification, as applicable, for the types of circumstances and trends that contributed to missed review goal times; and with respect to performance enhancement goals that were not met, a description of the efforts FDA has put in place to improve the ability of the Agency to meet each goal in the coming fiscal year. Such a description of corrective efforts is not required by statute for review time goals, but FDA is nonetheless providing this information in an effort to be complete.

This report satisfies this reporting requirement.

[27] Section 744C(c)(1) of the FD&C Act (21 U.S.C. 379j-43(c)(1)).

Executive Summary

A. FY 2021 Review Goal Performance Results

The following table represents FDA's FY 2021 updated performance results for goal types that the Agency was not able to fully report on in last year's report. If a goal type is not listed in this table for FY 2021, then the Agency fully reported on it in last year's report.[28]

Table E-I. FY 2021 Updated Performance Results for Goal Types Not Fully Reported Last Year

Goal Type	Circumstances and Trends Impacting the Ability to Meet the Goal Date	Corrective Action Plan
Review Goals	Standard Major ANDA Amendments (if PAI is required), Standard PAS (if PAI is required), Priority PAS (if PAI is required and applicant meets the requirements of a PFC), and Standard Major PAS (if PAI is required) goals were affected by travel restrictions related to the COVID-19 public health emergency and its impact on FDA's inspections.	FDA is continuing to strive to meet all GDUFA review goal dates while ensuring the health, safety, and well-being of its investigators. In FY 2022, FDA continued to conduct mission-critical and prioritized inspections and to use alternative approaches to inspections, to the extent possible, to reduce the need to conduct PAIs and to meet GDUFA review goal dates. As COVID-19 travel restrictions begin to ease, FDA continues to consider the steps it will take to resume standard operational levels of inspection activities.
Review Program Enhancement Goals	All FY 2021 goals were met.	No corrective action plan is needed.
Pre-ANDA Program Goals	All FY 2021 goals were met.	No corrective action plan is needed.
Facilities Goals	All FY 2021 goals were met.	No corrective action plan is needed.
Enhanced Accountability and Reporting Goals	All FY 2021 goals were met.	No corrective action plan is needed.
Policy Documents	All FY 2021 goals were met.	No corrective action plan is needed.
Public Meetings and Workshops	All FY 2021 goals were met.	No corrective action plan is needed.
Program and Process Implementation	All FY 2021 goals were met.	No corrective action plan is needed.
Reporting	All FY 2021 goals were met.	No corrective action plan is needed.
Website Publishing	All FY 2021 goals were met.	No corrective action plan is needed.

[28] See www.fda.gov/about-fda/user-fee-performance-reports/gdufa-performance-reports.

The following table represents FDA's FY 2022 preliminary performance results.

Table E-II. FY 2022 Preliminary Performance Results

Goal Type	Circumstances and Trends Impacting the Ability to Meet the Goal Date	Corrective Action Plan
Review Goals	Too soon to determine	The Agency is aware that it has missed some review goals, but because some submissions received in FY 2022 have associated review goals that fall within the subsequent fiscal year (i.e., in FY 2023), FDA cannot yet evaluate the entire performance for FY 2022 review goals. FDA will provide a full evaluation next year.
Review Program Enhancement Goals	Too soon to determine	The Agency is aware that it has missed some review goals, but because some submissions received in FY 2022 have associated review program enhancement goals that fall within the subsequent fiscal year (i.e., in FY 2023), FDA cannot yet evaluate the entire performance for FY 2022 review program enhancement goals. FDA will provide a full evaluation next year.
Pre-ANDA Program Goals	Too soon to determine	Some submission received in FY 2022 have associated pre-ANDA program goals that fall within the subsequent fiscal year (i.e., in FY 2023). Because FDA cannot yet evaluate the entire performance for FY 2022 pre-ANDA program goals, FDA will provide a full evaluation next year.
Facilities Goals	All FY 2022 goals were met.	No corrective action plan is needed.
Enhanced Accountability and Reporting Goals	All FY 2022 goals were met.	No corrective action plan is needed.
Policy Documents	All FY 2022 goals were met.	No corrective action plan is needed.
Public Meetings and Workshops	All FY 2022 goals were met.	No corrective action plan is needed.
Program and Process Implementation	All FY 2022 goals were met.	No corrective action plan is needed.
Reporting	All FY 2022 goals were met.	No corrective action plan is needed.
Website Publishing	All FY 2022 goals were met.	No corrective action plan is needed.

B. GDUFA Review Goals

The following section addresses section 744C(c)(2) of the FD&C Act (as added by section 904(c)(2) of FDARA), which requires FDA to provide a justification for the determination of review goals missed during FYs 2021 and 2022 and a description of the circumstances and any trends related to missed review goals.

This section presents GDUFA performance and workload information for all review performance goals for ANDAs.

1. FY 2021 Review Goal Performance

a. *Summary of Performance: A small number of review goals related to submissions for the Standard Major ANDA Amendments (if PAI is required), Standard PAS (if PAI is required), Priority PAS (if PAI is required and applicant meets the requirements of a PFC), and Standard Major PAS (if PAI is required) were missed during FY 2021.*

b. *Justification: These goals were affected by travel restrictions related to the COVID-19 public health emergency and its impact on FDA's inspections.*

c. *FY 2021 Corrective Actions: FDA is continuing to strive to meet all GDUFA review goal dates while ensuring the health, safety, and well-being of its investigators. In FY 2022, FDA continued to conduct mission-critical and prioritized inspections and to use alternative approaches to inspections, to the extent possible, to reduce the need to conduct PAIs and to meet GDUFA review goal dates. As COVID-19 travel restrictions begin to ease, FDA continues to consider the steps it will take to resume standard operational levels of inspection activities.*

2. FY 2022 Review Goal Performance

a. *Summary of Performance: The Agency is aware that it has missed some review goals, but because some submissions received in FY 2022 have associated review goals that fall within the subsequent fiscal year (i.e., in FY 2023), FDA cannot yet evaluate the entire performance for FY 2022 review goals. FDA will provide a full evaluation next year.*

b. *Justification: It is too soon to determine the justification.*

c. *FY 2022 Corrective Actions: It is too soon to determine if a corrective action is needed.*

C. GDUFA Performance Enhancement Goals

The following section addresses section 744C(c)(2) of the FD&C Act (as added by section 904(c)(2) of FDARA), which requires FDA to provide a detailed description of the efforts it has put in place for the fiscal year in which the report is submitted to improve FDA's ability to meet performance enhancement goals during FY 2022.

This section presents non-review performance goals cited in the GDUFA II Commitment Letter with required completion dates in FY 2022. For this report, "performance enhancement goals" are defined as any non-review performance goal with a specified deadline as named in the GDUFA II Commitment Letter.

1. FY 2022 Review Program Enhancement Goals

a. *Summary of Performance: The Agency is aware that it has missed some review program enhancement goals, but because some submissions received in FY 2022 have associated review program enhancement goals that fall within the subsequent fiscal year (i.e., in FY 2023), FDA cannot yet evaluate the entire performance for FY 2022 review program enhancement goals. FDA will provide a full evaluation next year.*

b. *Justification: It is too soon to determine the justification.*

c. *FY 2022 Corrective Actions: It is too soon to determine if a corrective action is needed.*

2. FY 2022 Pre-ANDA Goals Performance

a. *Summary of Performance: Some submissions received in FY 2022 have associated pre-ANDA goals that fall within the subsequent fiscal year (i.e., in FY 2023). Because FDA cannot yet evaluate the entire performance for FY 2022 pre-ANDA goals, FDA will provide a full evaluation next year.*

b. *Justification: It is too soon to determine if a justification is needed.*

c. *FY 2022 Corrective Actions: It is too soon to determine if a corrective action is needed.*

3. FY 2022 Facilities Goals Performance

a. *Summary of Performance: All FY 2022 goals were met.*

b. *Justification: No justification is needed.*

c. *FY 2022 Corrective Actions: No corrective action is needed.*

4. FY 2022 Enhanced Accountability and Reporting Goals Performance

a. *Summary of Performance: All FY 2022 goals were met.*

b. *Justification: No justification is needed.*

c. *FY 2022 Corrective Actions: No corrective action is needed.*

5. FY 2022 Policy Documents

a. *Summary of Performance: All FY 2022 goals were met.*

b. *Justification: No justification is needed.*

c. *FY 2022 Corrective Actions: No corrective action is needed.*

6. FY 2022 Public Meetings and Workshops

a. *Summary of Performance: All FY 2022 goals were met.*

b. *Justification: No justification is needed.*

c. *FY 2022 Corrective Actions: No corrective action is needed.*

7. FY 2022 Program and Process Implementation

a. *Summary of Performance: All FY 2022 goals were met.*

b. *Justification: No justification is needed.*

c. *FY 2022 Corrective Actions: No corrective action is needed.*

8. FY 2022 Website Publishing

a. *Summary of Performance: All FY 2022 goals were met.*

b. *Justification: No justification is needed.*

c. *FY 2022 Corrective Actions: No corrective action is needed.*

9. Reporting

a. *Summary of Performance: All FY 2022 goals were met.*

b. *Justification: No justification is needed.*

c. *FY 2022 Corrective Actions: No corrective action is needed.*

This report was prepared by FDA's Office of Planning, Evaluation, and Risk Management. For information on obtaining additional copies, please contact:

Office of Planning, Evaluation, and Risk Management
Office of the Commissioner
U.S. Food and Drug Administration
10903 New Hampshire Ave.
Silver Spring, MD 20993-0002
Phone: 301-796-4850
E-mail: OPERM_ADMIN_Team@fda.hhs.gov

This report is available on FDA's home page at https://www.fda.gov/.