criticized FDA regulation of IGAs in animals for neglecting animal welfare. The remaining comments came from industry (companies that produce IGAs and trade associations), individual developers of IGAs in animals, academics, non-governmental organizations (consumer, environmental), and individual consumers.

FDA has made changes in the final GFI #187B that include additional explanation or clarification about: (1) how FDA's animal safety review includes animal health and well-being; (2) how compositional analysis relates to the food safety evaluation; (3) what FDA means by a ''significant change'' with respect to durability; (4) what can be included in a single IGA-related application; (5) what methods, including methods other than whole genome sequencing, may be most appropriate for molecular characterization of the lineage of animals with the IGA; (6) further clarification regarding data expectations, including what data constitutes a ''full characterization'' of the site of alteration and potential unintended alterations; and (7) more detailed information on review timelines. In addition, editorial changes were made to improve clarity. The guidance announced in this notice finalizes the draft guidance dated May 2024.

This level 1 guidance is being issued consistent with FDA's good guidance practices regulation (21 CFR 10.115). The guidance represents the current thinking of FDA on ''Heritable Intentional Genomic Alterations in Animals: The Approval Process.'' It does not establish any rights for any person and is not binding on FDA or the public. You can use an alternative approach if it satisfies the requirements of the applicable statutes and regulations.

II. Paperwork Reduction Act of 1995

While this guidance contains no collection of information, it does refer to previously approved FDA collections of information. The previously approved collections of information are subject to review by the Office of Management and Budget (OMB) under the Paperwork Reduction Act of 1995 (PRA) (44 U.S.C. 3501–3521). The collections of information in 21 CFR part 25 have been approved under OMB control number 0910–0322; the collections of information in 21 CFR part 58 have been approved under OMB control number 0910–0119; the collections of information in 21 CFR part 207 have been approved under OMB control number 0910–0045; the collections of information in 21 CFR part 211 have been approved under OMB control number 0910–0139; the collections of information in 21 CFR part 511 have been approved under OMB control number 0910–0117; the collections of information in 21 CFR part 514 have been approved under OMB control number 0910–0284; and the collections of information in 21 CFR 558.6(a)(4) have been approved under OMB control number 0910–0363.

III. Electronic Access

Persons with access to the internet may obtain the guidance at *https://www.fda.gov/animal-veterinary/guidance-regulations/guidance-industry, https://www.fda.gov/regulatory-information/search-fda-guidance-documents,* or *https://www.regulations.gov.*

Dated: December 27, 2024.

Kimberlee Trzeciak,

Deputy Commissioner for Policy, Legislation, and International Affairs.

[FR Doc. 2024–31532 Filed 1–6–25; 8:45 am]

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DEPARTMENT OF HEALTH AND HUMAN SERVICES

Food and Drug Administration

[Docket No. FDA–2024–D–4689]

Considerations for the Use of Artificial Intelligence To Support Regulatory Decision-Making for Drug and Biological Products; Draft Guidance for Industry; Availability; Comment Request

AGENCY: Food and Drug Administration, HHS.

ACTION: Notice of availability.

SUMMARY: The Food and Drug Administration (FDA or Agency) is announcing the availability of a draft guidance for industry entitled ''Considerations for the Use of Artificial Intelligence To Support Regulatory Decision-Making for Drug and Biological Products.'' In accordance with its mission of protecting, promoting, and advancing public health, FDA's Center for Drug Evaluation and Research (CDER), in collaboration with the Center for Biologics Evaluation and Research (CBER), the Center for Devices and Radiological Health (CDRH), the Center for Veterinary Medicine (CVM), the Oncology Center of Excellence (OCE), the Office of Combination Products (OCP), and the Office of Inspections and Investigations (OII), is issuing this draft guidance to provide recommendations to industry on the use of artificial intelligence (AI) to produce information or data intended to support regulatory decision-making regarding the safety, effectiveness, or quality for drug and biological products.

DATES: Submit either electronic or written comments on the draft guidance by April 7, 2025 to ensure that the Agency considers your comment on this draft guidance before it begins work on the final version of the guidance. Submit electronic or written comments on the proposed collection of information in the draft guidance by April 7, 2025.

ADDRESSES: You may submit comments on any guidance at any time as follows:

Electronic Submissions

Submit electronic comments in the following way:

- *Federal eRulemaking Portal: https://www.regulations.gov.* Follow the instructions for submitting comments. Comments submitted electronically, including attachments, to *https://www.regulations.gov* will be posted to the docket unchanged. Because your comment will be made public, you are solely responsible for ensuring that your comment does not include any confidential information that you or a third party may not wish to be posted, such as medical information, your or anyone else's Social Security number, or confidential business information, such as a manufacturing process. Please note that if you include your name, contact information, or other information that identifies you in the body of your comments, that information will be posted on *https://www.regulations.gov.*
- If you want to submit a comment with confidential information that you do not wish to be made available to the public, submit the comment as a written/paper submission and in the manner detailed (see ''Written/Paper Submissions'' and ''Instructions'').

Written/Paper Submissions

Submit written/paper submissions as follows:

- *Mail/Hand Delivery/Courier (for written/paper submissions):* Dockets Management Staff (HFA–305), Food and Drug Administration, 5630 Fishers Lane, Rm. 1061, Rockville, MD 20852.
- For written/paper comments submitted to the Dockets Management Staff, FDA will post your comment, as well as any attachments, except for information submitted, marked and identified, as confidential, if submitted as detailed in ''Instructions.''

Instructions: All submissions received must include the Docket No.

FDA–2024–D–4689 for ''Considerations for the Use of Artificial Intelligence To Support Regulatory Decision-Making for Drug and Biological Products; Guidance for Industry.'' Received comments will be placed in the docket and, except for those submitted as ''Confidential Submissions,'' publicly viewable at *https://www.regulations.gov* or at the Dockets Management Staff between 9 a.m. and 4 p.m., Monday through Friday, 240–402–7500.

- Confidential Submissions—To submit a comment with confidential information that you do not wish to be made publicly available, submit your comments only as a written/paper submission. You should submit two copies total. One copy will include the information you claim to be confidential with a heading or cover note that states ''THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION.'' The Agency will review this copy, including the claimed confidential information, in its consideration of comments. The second copy, which will have the claimed confidential information redacted/blacked out, will be available for public viewing and posted on *https://www.regulations.gov.* Submit both copies to the Dockets Management Staff. If you do not wish your name and contact information to be made publicly available, you can provide this information on the cover sheet and not in the body of your comments and you must identify this information as ''confidential.'' Any information marked as ''confidential'' will not be disclosed except in accordance with 21 CFR 10.20 and other applicable disclosure law. For more information about FDA's posting of comments to public dockets, see 80 FR 56469, September 18, 2015, or access the information at: *https://www.govinfo.gov/content/pkg/FR-2015-09-18/pdf/2015-23389.pdf.*

Docket: For access to the docket to read background documents or the electronic and written/paper comments received, go to *https://www.regulations.gov* and insert the docket number, found in brackets in the heading of this document, into the ''Search'' box and follow the prompts and/or go to the Dockets Management Staff, 5630 Fishers Lane, Rm. 1061, Rockville, MD 20852, 240–402–7500.

You may submit comments on any guidance at any time (see 21 CFR 10.115(g)(5)).

Submit written requests for single copies of this draft guidance to the Division of Drug Information, Center for Drug Evaluation and Research, Food and Drug Administration, 10001 New Hampshire Ave., Hillandale Building, 4th Floor, Silver Spring, MD 20993–0002. Send one self-addressed adhesive label to assist that office in processing your request or include a Fax number to which the draft guidance may be sent. See the **SUPPLEMENTARY INFORMATION** section for information on electronic access to the draft guidance.

FOR FURTHER INFORMATION CONTACT: Tala Fakhouri, Center for Drug Evaluation and Research, Food and Drug Administration, 10903 New Hampshire Ave., Bldg. 51, Rm. 6330, Silver Spring, MD 20993–0002, 301–837–7407, *Tala.Fakhouri@fda.hhs.gov;* James Myers, Center for Biologics Evaluation and Research, Food and Drug Administration, 10903 New Hampshire Ave., Bldg. 71, Rm. 7301, Silver Spring, MD 20993–0002, 240–402–7911, *James.Myers@fda.hhs.gov;* or Sonja Fulmer, Center for Devices and Radiological Health, Food and Drug Administration, 10903 New Hampshire Ave., Bldg. 66, Rm. 5530, Silver Spring, MD 20993–0002, 240–402–5979, *Sonja.Fulmer@fda.hhs.gov.*

SUPPLEMENTARY INFORMATION:

I. Background

FDA is announcing the availability of a draft guidance entitled ''Considerations for the Use of Artificial Intelligence To Support Regulatory Decision-Making for Drug and Biological Products.'' This draft guidance, when finalized, will provide recommendations to industry on the use of AI to produce information or data intended to support regulatory decision-making regarding safety, effectiveness, or quality for drugs. Specifically, this guidance proposes a risk-based credibility assessment framework that may be used for establishing and evaluating the credibility of an AI model for a particular context of use (COU). For the purposes of this guidance, credibility refers to trust, established through the collection of credibility evidence, in the performance of an AI model for a particular COU. Credibility evidence is any evidence that could support the credibility of an AI model output for a specific COU. The COU defines the specific role and scope of the AI model used to address a question of interest. This guidance does not endorse the use of any specific AI approach or technique.

This draft guidance discusses the use of AI models in the nonclinical, clinical, postmarketing, and manufacturing phases of the drug product life cycle, where the specific use of the AI model is to produce information or data to support regulatory decision-making regarding safety, effectiveness, or quality for drugs. This draft guidance does not address the use of AI models: (1) in drug discovery or (2) when used for operational efficiencies (*e.g.,* internal workflows, resource allocation, drafting/writing a regulatory submission) that do *not* impact patient safety, drug quality, or the reliability of results from a nonclinical or clinical study. We encourage sponsors to engage with FDA early if they are uncertain about whether or not their use of AI is within the scope of this guidance.

The Agency recognizes that the use of AI in drug development is broad and rapidly evolving. This draft guidance, when finalized, is expected to help ensure that AI models used to support regulatory decision-making are sufficiently credible for the COU. The risk-based credibility assessment framework proposed in this draft guidance is intended to help sponsors and other interested parties plan, gather, organize, and document information to establish the credibility of AI model outputs. As described in this guidance, the proposed recommendations, considerations, and assessment activities (*e.g.,* the level of oversight, the stringency of the credibility assessments and the performance acceptance criteria, the risk mitigation strategy, and the amount of documentation and detail associated with AI use) that can be used to establish model credibility will generally be tailored to the specific COU and will depend on model risk.

This draft guidance also describes different options by which industry may engage with the Agency on issues related to AI model development. The draft guidance emphasizes the importance of early engagement with the Agency to help: (1) set expectations regarding the appropriate credibility assessment activities for the proposed model based on model risk and COU and (2) identify potential challenges and how such challenges may be addressed. The Agency recognizes, however, that certain uses of AI occur outside of the product development and marketing application processes with established meeting options. Specifically, in the context of postmarketing pharmacovigilance, certain documentation (*e.g.,* processes and procedures) is not generally submitted to the Agency but is maintained according to the sponsor's standard operating procedures and made available to the Agency upon request (*e.g.,* during an inspection). In such cases, sponsors may choose to complete all the steps outlined in the draft guidance without seeking early engagement with the Agency. Sponsors remain responsible for compliance with statutory and regulatory requirements,

including postmarketing safety surveillance and reporting requirements, regardless of the technology utilized.

The Agency also recognizes that sponsors may have questions about credibility assessment plans in connection with the postmarketing phase. Therefore, the Agency seeks feedback about whether development of additional guidance specific to the use of AI models in postmarketing pharmacovigilance would be helpful and, if so, the topics that would be most useful for the Agency to address. For general discussion about the use of AI models or other emerging technologies in pharmacovigilance, FDA has established the Emerging Drug Safety Technology Meeting (EDSTM) Program.

The risk-based credibility assessment framework proposed within the draft guidance is informed by: (1) over 800 comments received on the 2023 discussion papers published by CDER entitled ''Using Artificial Intelligence & Machine Learning in the Development of Drug & Biological Products'' (*https://www.fda.gov/media/167973/download*) and ''Artificial Intelligence in Drug Manufacturing'' (*https://www.fda.gov/media/165743/download*); (2) FDA's experience with reviewing over 300 submissions with AI and machine learning components across all phases of the drug development process; and (3) current regulatory science research. However, FDA understands that this is a rapidly evolving field, involving multidisciplinary expertise. FDA requests public comment from industry and all other interested parties on the guidance, with emphasis on the following items:

- How well the proposed risk-based credibility assessment framework aligns with industry's experience; and
- Whether the options available for sponsors and other interested parties to engage with FDA on AI are sufficient.

This draft guidance is being issued consistent with FDA's good guidance practices regulation (21 CFR 10.115). The draft guidance, when finalized, will represent the current thinking of FDA on the use of AI to support regulatory decision-making for drug and biological products. It does not establish any rights for any person and is not binding on FDA or the public. You can use an alternative approach if it satisfies the requirements of the applicable statutes and regulations.

II. Paperwork Reduction Act of 1995

While this guidance contains no collection of information, it does refer to previously approved FDA collections of information. The previously approved collections of information are subject to review by the Office of Management and Budget (OMB) under the Paperwork Reduction Act of 1995 (PRA) (44 U.S.C. 3501–3521). The collections of information in 21 CFR part 312 have been approved under OMB control number 0910–0014; the collections of information in 21 CFR part 314 have been approved under OMB control number 0910–0001; the collections of information in 21 CFR part 601 have been approved under OMB control number 0910–0338.

III. Electronic Access

Persons with access to the internet may obtain an electronic version of the draft guidance at *https://www.fda.gov/drugs/guidance-compliance-regulatory-information/guidances-drugs, https://www.fda.gov/vaccines-blood-biologics/guidance-compliance-regulatory-information-biologics/biologics-guidances, https://www.fda.gov/medical-devices/device-advice-comprehensive-regulatory-assistance/guidance-documents-medical-devices-and-radiation-emitting-products, https://www.fda.gov/regulatory-information/search-fda-guidance-documents,* or *https://www.regulations.gov.*

Dated: December 27, 2024.

Kimberlee Trzeciak,

Deputy Commissioner for Policy, Legislation, and International Affairs.

[FR Doc. 2024–31542 Filed 1–6–25; 8:45 am]

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DEPARTMENT OF HEALTH AND HUMAN SERVICES

Food and Drug Administration

[Docket No. FDA–2021–D–0756]

Validation and Verification of Analytical Testing Methods Used for Tobacco Products; Guidance for Industry; Availability

AGENCY: Food and Drug Administration, HHS

ACTION: Notice of availability.

SUMMARY: The Food and Drug Administration (FDA, Agency, or we) is announcing the availability of a final guidance for industry entitled ''Validation and Verification of Analytical Testing Methods Used for Tobacco Products.'' The guidance provides information and recommendations related to the validation and verification of analytical test methods, including analytical testing of tobacco product constituents, ingredients, and additives, as well as stability testing of tobacco products. This guidance is intended to help industry produce more consistent and reliable analytical data used to support regulatory submissions for finished tobacco products. This guidance finalizes the draft guidance of the same title issued in December 2021.

DATES: The announcement of the guidance is published in the **Federal Register** on January 7, 2025.

ADDRESSES: You may submit either electronic or written comments on Agency guidances at any time as follows:

Electronic Submissions

Submit electronic comments in the following way:

- *Federal eRulemaking Portal: https://www.regulations.gov.* Follow the instructions for submitting comments. Comments submitted electronically, including attachments, to *https://www.regulations.gov* will be posted to the docket unchanged. Because your comment will be made public, you are solely responsible for ensuring that your comment does not include any confidential information that you or a third party may not wish to be posted, such as medical information, your or anyone else's Social Security number, or confidential business information, such as a manufacturing process. Please note that if you include your name, contact information, or other information that identifies you in the body of your comments, that information will be posted on *https://www.regulations.gov.*
- If you want to submit a comment with confidential information that you do not wish to be made available to the public, submit the comment as a written/paper submission and in the manner detailed (see ''Written/Paper Submissions'' and ''Instructions'').

Written/Paper Submissions

Submit written/paper submissions as follows:

- *Mail/Hand Delivery/Courier (for written/paper submissions):* Dockets Management Staff (HFA–305), Food and Drug Administration, 5630 Fishers Lane, Rm. 1061, Rockville, MD 20852.
- For written/paper comments submitted to the Dockets Management Staff, FDA will post your comment, as well as any attachments, except for information submitted, marked, and identified, as confidential, if submitted as detailed in ''Instructions.''

Instructions: All submissions received must include the Docket No. FDA–2021–D–0756 for ''Validation and Verification of Analytical Testing Methods Used for Tobacco Products.''