No. 24-1936

United States Court of Appeals for the Federal Circuit

TEVA BRANDED PHARMACEUTICAL PRODUCTS R&D, INC., NORTON (WATERFORD) LTD., TEVA PHARMACEUTICALS USA, INC.

Plaintiffs-Appellants,

– v. –

AMNEAL PHARMACEUTICALS OF NEW YORK, LLC, AMNEAL IRELAND LTD., AMNEAL PHARMACEUTICALS LLC, AMNEAL PHARMACEUTICALS, INC.

Defendants-Appellees.

Appeal from the U.S. District Court for the District of New Jersey, No. 23-cv-20964 (SRC), Judge Stanley R. Chesler

CORRECTED BRIEF OF *AMICUS CURIAE* SANOFI-AVENTIS U.S. LLC IN SUPPORT OF PLAINTIFFS-APPELLANTS AND REVERSAL

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CERTIFICATE OF INTEREST

Pursuant to Fed. Cir. R. 47.4, counsel for *Amicus Curiae* Sanofi-Aventis U.S. LLC certifies the following:

1. Provide the full names of all entities represented by undersigned counsel in this case.

Sanofi-Aventis U.S. LLC

2. Provide the full names of all real parties in interest for the entities. Do not list the real parties if they are the same as the entities.

N/A

3. Provide the full names of all parent corporations for the entities and all publicly held companies that own 10% or more stock in the entities.

Sanofi

4. List all law firms, partners, and associates that (a) appeared for the entities in the originating court or agency or (b) are expected to appear in this court for the entities. Do not include those who have already entered an appearance in this court.

N/A

5. Other than the originating case(s) for this case, are there related or prior cases that meet the criteria under Fed. Cir. R. 47.5(a)?

N/A

6. Provide any information required under Fed. R. App. P. 26.1(b) (organizational victims in criminal cases) and 26.1(c) (bankruptcy case debtors and trustees).

N/A

Dated: August 7, 2024

/s/ Robert N. Stander
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INTEREST OF *AMICUS CURIAE*

Sanofi-Aventis U.S. LLC is the principal U.S. subsidiary of Sanofi, a leading global healthcare company engaged in the research, development, and manufacture of therapeutic solutions to meet patient needs. Researching and developing new drugs is a costly, lengthy, and uncertain process, and Sanofi invests billions of dollars each year in its R&D pipeline, including many products that never make it to market. Sanofi relies on patents to protect its innovative new drug products, recoup its investment, and fund future innovations. Moreover, it is obligated under the Hatch-Waxman Act to list patents in the Food and Drug Administration's (FDA's) "Orange Book." Sanofi has a significant interest in ensuring that the Orange Book patent listing requirement is interpreted correctly, consistently, and fairly.[1]

INTRODUCTION

The Hatch-Waxman Act struck a balance between two competing interests: incentivizing the costly and risky development of new drug therapies, while increasing patient access to lower cost generic medicines. It has been an unqualified success by any measure. In recent years, more than 90% of prescriptions in the U.S. have been filled with generic medications, and "[t]he pharmaceutical industry devoted $83 billion

[1] No counsel for a party authored this brief in whole or in part; no person other than amicus or its counsel contributed money intended to fund its preparation or submission. All parties consented to the filing of this brief. Fed. R. App. P. 29(a)(2), (a)(4)(E).

to R&D expenditures" in a single reported year.[2] This is due in no small part to the framework Hatch-Waxman created for efficiently resolving patent disputes between innovative manufacturers of FDA-approved drugs and follow-on manufacturers seeking FDA approval for generic versions of those drugs.

At the core of that framework is the Orange Book listing provision, which requires new drug applicants to disclose each patent that "claims the drug for which the applicant submitted the application." 21 U.S.C. § 355(b)(1)(A)(viii)(I). The Orange Book provides crucial notice to generic drug manufacturers regarding the existence of patents that may impact their ability to market a generic version of the approved drug.

The issue on appeal is about which patents must be listed for an FDA-approved drug-device combination product, and the answer to that question could have broad implications for Orange Book listing in general. Under the correct reading of the statute, a patent "claims the drug for which the applicant submitted the application" if the patent "reads on" the approved drug product. As to drug-device combination products, this includes patents directed to the device constituent, or a component of the device constituent, regardless of whether they recite the active pharmaceutical ingredient. Those patents satisfy the listing standard because they claim the drug and

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[2] FDA, Office of Generic Drugs Annual Report, at ii (2021), https://www.fda.gov/drugs/generic-drugs/office-generic-drugs-2021-annual-report; CBO, Research and Development in the Pharmaceutical Industry, at 1 (Apr. 2021), https://www.cbo.gov/publication/57126.

could be infringed by a generic version. This is by far the most sensible reading of the statute, based on its text, purpose, and FDA regulations and practice.

The district court erroneously narrowed the listing provision to exclude broad categories of patents that claim FDA-approved drug products and that would be infringed by a generic imitation. Relying on a First Circuit decision involving Lantus, one of Sanofi's insulin products, the district court construed "claims the drug" to mean recites the active ingredient, or perhaps (the reasoning is unclear) recites the name of the FDA-approved drug product. This ignores the patent-law meaning of "claims," mangles the statutory definition of "drug," misidentifies the "drug" that FDA actually approves, and eviscerates the listing requirement's notice function.

If left in place, the district court's troubling decision could exclude many types of drug product patents—not only device patents, but genus patents and formulation patents that have long been listed in the Orange Book under well-accepted practice. Each of these types of patents may claim the drug product without reciting the active ingredient or the approved drug's name. Further, as to device-related patents, in 1990 Congress amended the listing statute's definition of "drug" to include "devices" and "their components, parts, or accessories," so the FDA could regulate drug-device combination products. *Genus Med. Techs., LLC v. FDA*, 427 F. Supp. 3d 74, 84-85 (D.D.C. 2019), *aff'd*, 994 F.3d 631 (D.C. Cir. 2021). Consistent with this amendment, the statute must be read to include drug product patents directed to devices or device components of a drug-device combination product. That makes sense, moreover,

because devices and their components are integral to safety and efficacy, which is why FDA requires safety and efficacy data regarding device constituents of drug-device combination products to support approval.

The district court's reasoning, moreover, reveals undue hostility toward patent listing, as if listing provides patent-holders with an unfair advantage over generic manufacturers. That is inaccurate and at odds with the balance Congress struck through intertwined provisions of the Hatch-Waxman Act. First, generic manufacturers may rely on the innovator's costly testing data and clinical studies when seeking FDA approval for a generic version of that drug, thereby expediting the process. Second, by listing patents in the Orange Book, innovators cannot surprise generic manufacturers with those patents after a generic launch. Third, submitting a generic drug application constitutes a statutory act of infringement of listed patents, permitting immediate litigation without risk of damages. Fourth, to allow time for patent litigation, an infringement suit asserting listed patents triggers a 30-month stay of final FDA approval of the generic manufacturer's application. Fifth, the first generic manufacturer to challenge a listed patent and obtain approval receives a 180-day generic exclusivity period. The district court's rule upsets this framework. And it ultimately harms generic manufacturers by depriving them of advance notice of relevant patents, an immediate opportunity to resolve patent disputes in parallel with the FDA-approval process, and the ability to obtain 180-day generic exclusivity.

It is time for a course correction, which this Court can provide simply by interpreting the statute as written, in light of its patent-law and FDA regulatory context. The Court should hold that a patent "claims the drug for which the applicant submitted the application" if the patent "reads on" the drug product, including an FDA-approved drug-device combination product.

BACKGROUND

I. Hatch-Waxman Balances Competing Interests Between Supporting Innovation And Facilitating Generic Drug Approval.

A company seeking to market a drug product in the United States must first obtain approval from the FDA, which administers the Food, Drug, and Cosmetic Act (FDCA). *See Apotex, Inc. v. Thompson*, 347 F.3d 1335, 1337 (Fed. Cir. 2003). Innovative manufacturers must submit a New Drug Application (NDA) containing extensive test data showing that the product is safe and effective. *Id.* at 1337-38. Developing new pharmaceuticals and obtaining safety and efficacy data is extraordinarily risky and costly.[3] Sustainable, long-term innovation requires that these costs be recouped through patent protection.

Of course, once patent protection expires, manufacturers are permitted to manufacture generic copies. Generic manufacturers are also permitted, under Hatch-Waxman, to rely on safety and efficacy data contained in the NDA for the original drug

[3] CBO, Research and Development, *supra* n.2, at 13-15.

when obtaining FDA approval for their generic version copies, and to make and use a drug for development purposes without infringing any patent claiming the approved drug. *Apotex*, 347 F.3d at 1338.[4] Further, the first generic to challenge a patent and obtain FDA approval is entitled to a 180-day exclusivity period during which FDA may approve no other generic versions. 21 U.S.C. §355(j)(5)(B)(iv). In short, generic applicants are permitted to copy both the innovation and the testing data—vastly reducing the cost and time it takes to bring a drug to market—and are then eligible for a 180-day period of generic exclusivity.

Hatch-Waxman also provides protections for innovators. Among other things, it extends the terms of certain drug patents to reflect the time necessary to obtain FDA approval. It also creates a framework for efficient, pre-market resolution of patent-related disputes, which benefits both innovators and generics. *Apotex*, 347 F.3d at 1338.

II. The Orange Book Notifies Generics Of Patents Covering The Product.

To facilitate efficient resolution of patent disputes, NDA applicants and holders must disclose any "drug substance" or "drug product" patent that "claims the drug for which the applicant submitted the application" and "for which a patent infringement

[4] There are two pathways for approving generic or follow-on drugs: (1) abbreviated NDAs, known as ANDAs, 21 U.S.C. § 355(j); and (2) streamlined NDAs, known as 505(b)(2) applications, *id.* § 355(b)(2). ANDAs rely exclusively on studies that were conducted by the innovator, whereas 505(b)(2) applications rely on such studies only in part. When this brief refers to generic manufacturers and ANDAs, the analysis is generally applicable to 505(b)(2) follow-on drugs as well.

claim could reasonably be asserted" against an unlicensed manufacturer of the drug. 21 U.S.C. § 355(b)(1)(A)(viii). FDA must provide public notice of the disclosed patents, which it does by listing them in its "Orange Book." *Apotex*, 347 F.3d at 1338.

A key purpose of listing these patents is to provide notice to generic manufacturers. Without ready access to that information, generic drug manufacturers would be forced to make drug-design and commercialization decisions in the dark, and face substantial uncertainty as to whether launching a generic drug would result in patent litigation and potentially catastrophic liability.[5]

When a generic manufacturer submits an abbreviated new drug application (ANDA) to FDA, it must include a certification for each patent listed in the Orange Book for the approved drug it seeks to copy. The certification must state that no patent information has been filed, the patent has expired, the applicant will wait until the patent expires, or the patent is invalid or will not be infringed by the generic drug. 21 U.S.C. § 355(j)(2)(A)(vii). Under the Act, the certification that a listed patent is invalid or will not be infringed constitutes patent infringement, permitting immediate assertion of infringement claims and efficient resolution of patent disputes without risk of damages while FDA reviews the ANDA. 35 U.S.C. § 271(e)(2)(A). To permit time for resolving patent disputes before the generic goes to market, the filing of a patent infringement

[5] GAO, Stakeholder Views on Improving FDA's Information on Patents, at 15-16 (Mar. 2023), https://www.gao.gov/products/gao-23-105477 ("GAO Rpt.").

claim triggers a 30-month stay of final ANDA approval, unless the litigation is decided earlier or the court modifies the 30-month period. *Apotex*, 347 F.3d at 1339.

III. FDA Reviews And Approves Drug-Device Combination Products.

Congress has tasked FDA with regulating both pharmaceutical drugs and medical devices, along with "combination products" containing drug components and device components. 21 U.S.C. § 353(g). To facilitate regulation of drug-device combination products, Congress amended the definition of "drug" in the FDCA to encompass both drugs and devices. *Genus Med. Techs.*, 427 F. Supp. 3d at 85 ("The provision excluding devices from the drug definition … was removed to enable combination drug/device products to be regulated as drugs in appropriate cases.").

Combination products include single-entity products: a combination of drug and device components "that are physically, chemically, or otherwise combined or mixed and produced as a single entity." 21 C.F.R. § 3.2(e)(1). And they include co-packaged products: a combination of separate drug and device components that are packaged together. *Id.* § 3.2(e)(2); *see Genus Med. Techs.*, 427 F. Supp. 3d at 84 (discussing combination products). Single-entity products, along with other types of combinations, are combination products approved by FDA.[6] The Agency has identified "[p]refilled

[6] FDA, Principles of Premarket Pathways for Combination Products Guidance for Industry and FDA Staff, at 2 (Jan. 2022), https://www.fda.gov/regulatory-information/search-fda-guidance-documents/principles-premarket-pathways-combination-products ("Combination Products Guidance"); FDA, Frequently Asked Questions About Combination Products (Aug. 16, 2022),

drug delivery systems"—including "insulin injector pen[s]" and "metered dose inhaler[s]"—as examples of single-entity drug-device combination products.[7]

Drug-device combination products with a pharmacological "primary mode of action" are generally reviewed and approved in a single NDA as a single drug product.[8] The application must contain safety and efficacy information supporting both the device constituent and the formulation constituent. FDA reviews all constituent parts of the drug product.[9] Thus, for a pharmacological drug product that "includes a device constituent part," the NDA must include, and FDA must review, "engineering, biocompatibility, performance data, and other design validation data" for the device constituent.[10]

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https://www.fda.gov/combination-products/about-combination-products/frequently-asked-questions-about-combination-products ("Combination Products FAQ"); *see also* Postmarketing Safety Reporting for Combination Products, 81 Fed. Reg 92603, 92605 (Dec. 20, 2016) (components of drug device combination products are often called "constituent parts").

[7] Combination Products FAQ, *supra* n.6.

[8] 21 U.S.C. § 353(g)(1)(B), (g)(1)(D); *see also* Combination Products Guidance, *supra* n.6 at 5-6, 12-13.

[9] Combination Products Guidance, *supra* n.6 at 6 ("To appropriately ensure the safety and effectiveness of a combination product in a single application, such application should enable a substantially similar evaluation to that which would be applied to each constituent part if they were reviewed under separate applications.").

[10] *Id.* at 7.

IV. The District Court Incorrectly Restricts The Listing Statute.

The approved drug in this case is an asthma inhaler, a single-entity drug-device combination product approved as "ProAir HFA® (albuterol sulfate) Inhalation Aerosol." Appx25. Some of the patents Teva listed in the Orange Book for this product are directed to the device constituent of the combination product. Appx36. The district court concluded that these patents did not "claim the drug for which the applicant submitted the application." Appx33. According to the district court, a patent claims a combination drug product only if it recites the active ingredient or recites the name of the approved drug product. Appx35-37.

The district court relied on the First Circuit's decision in *In re Lantus Direct Purchaser Antitrust Litigation*, 950 F.3d 1 (1st Cir. 2020). There, the drug was an injector pen prefilled with insulin glargine—a single-entity drug-device combination product FDA-approved as the Lantus SoloSTAR. *Id.* at 5. The patent in issue was directed to a dosage drive mechanism used in the device constituent of the Lantus SoloSTAR. *Id.* As with the district court below, the First Circuit held that this patent did not "claim the drug for which the application was filed." *Id.* at 8. It first suggested that a patent "claims the drug" only if it recites the active ingredient, and Sanofi's patent "does not even mention … insulin glargine." *Id.* at 7. It then concluded that, even assuming "Lantus SoloSTAR is a drug under the statute," Sanofi's patent "does not claim or even mention the Lantus SoloSTAR," but instead "claims a device intended for use in an injector pen." *Id.* at 8.

ARGUMENT

Imagine you are a generic drug manufacturer seeking FDA approval for a generic version of a transdermal medicating patch. You see just one soon-to-expire patent listed in the Orange Book that is directed to the active pharmaceutical ingredient, but nothing else. Your independent search turns up no other patents reciting the name of the FDA-approved drug. After you spend tens of millions of dollars obtaining FDA approval, ramping up manufacturing, and launching your product, the NDA-holder sues you for infringement, asserting several additional patents directed only to the novel material in the transdermal patch, and seeking both injunctive relief and damages. You are now faced with the risk of your product being enjoined, overwhelming damages liability, and possibly bankruptcy. If only the NDA-holder had been required to list all the relevant patents.

This is the needless problem created by the First Circuit's *Lantus* decision and perpetuated by the district court's decision below. This Court should steer the Orange Book listing provision back on course. It can do so by correctly interpreting "claims the drug" under 21 U.S.C. § 355(b)(1)(A)(viii) to require NDA-holders to list every patent that "reads on" the approved drug product—including single-entity drug-device combination products like Teva's asthma inhalers and Sanofi's insulin pens. This interpretation best squares with the statute's text, purpose, and FDA drug-approval regulations.

I. A Patent "Claims The Drug" If It Reads On An FDA-Approved Drug-Device Combination Product.

The FDCA requires that NDA applicants and holders submit information on "each patent for which a claim of patent infringement could reasonably be asserted if a person not licensed by the owner of the patent engaged in the manufacture, use, or sale of the drug, and that … claims the drug for which the applicant submitted the application and is a drug substance (active ingredient) patent or a drug product (formulation or composition) patent." 21 U.S.C. § 355(b)(1)(A)(viii). The key question here is what it means for a patent to "claim[] the drug for which the applicant submitted the application." Under well-established patent-law principles, a patent "claims" the drug if it "reads on" the drug, and under FDA regulations, the "drug for which the applicant submitted the application" is the drug product—the finished dosage form—approved by FDA.

A. A patent "claims" a product if it "reads on" the product.

As this Court has held repeatedly, an open-ended patent "claims" a product if each claim limitation is found in the product. *Corning Glass Works v. Sumitomo Elec. U.S.A., Inc.*, 868 F.2d 1251, 1257-58 (Fed. Cir. 1989); *Allen Eng'g Corp. v. Bartell Indus., Inc.*, 299 F.3d 1336, 1345 (Fed. Cir. 2002). To make that determination, "the words of the claim must … be 'read on' the [product] to determine whether each of the limitations recited in the claim is present in the [product]." *Corning Glass*, 868 F.2d at 1258. If so, the patent is said to "read on" the product.

A patent is open-ended if it uses the transitional phrase "comprising" before reciting the claim limitations. The "term 'comprising' creates a presumption that the recited elements are only a part of the [invention]" and "that the claim does not exclude additional, unrecited elements." *Multilayer Stretch Cling Film Holdings, Inc. v. Berry Plastics Corp.*, 831 F.3d 1350, 1358 (Fed. Cir. 2016) (citation omitted); *Gillette Co. v. Energizer Holdings, Inc.*, 405 F.3d 1367, 1371-72 (Fed. Cir. 2005) ("The addition of elements [in the accused product] not recited in the claim cannot defeat infringement."). Thus, an open-ended patent reads on a product, and therefore claims the product, so long as each of the claim limitations is present in the product, regardless of whether the product contains additional elements that are not specified in the patent.

This Court applied the "reads on" meaning of "claims" to the Orange Book listing provision in *Apotex, Inc. v. Thompson*, 347 F.3d 1335, 1343-44 (Fed. Cir. 2003). "Under that provision," this Court explained, "a patent must be listed if it contains a product claim that reads on the drug that is the subject of the NDA. … The listing decision thus requires what amounts to a finding of patent infringement, except that the 'accused product' is the drug that is the subject of the NDA." *Id.* at 1344. Further, under well-established law, an open-ended patent reads on a drug even if the drug contains "additional, unrecited elements." *Multilayer Stretch*, 831 F.3d at 1358. *Apotex* correctly explained the meaning of "claims" for purposes of the listing provision.

B. The "drug" is the FDA-approved "finished dosage form."

Next, the listing requirement applies to patents that claim "the drug for which the applicant submitted the application." 21 U.S.C. § 355(b)(1)(A)(viii)(I). Under ordinary tools of statutory interpretation, the "drug" is not solely the active pharmaceutical ingredient. The "drug" is instead the product approved by FDA, which the Agency refers to as the "finished dosage form." Thus, a patent "claims the drug" if it reads on the finished dosage form.

1. Begin with the statutory definition of "drug." Congress defined "drug," in relevant part, as "articles intended for use in the diagnosis, cure, mitigation, treatment, or prevention of disease in man or other animals; and … articles (other than food) intended to affect the structure or any function of the body of man or other animals; and … articles intended for use as a component of any article specified [above]." 21 U.S.C. § 321(g)(1). This definition points to "articles"—i.e., "a particular material thing" or "an item of goods or property." Oxford English Dictionary (Online Ed. 2024); *see also* Concise Oxford Dictionary of Current English at 60 (8th ed. 1990) ("an item or commodity"). Congress said nothing about active ingredients or drug substances; it instead used a far broader term—"articles"—which encompasses every "item" or "material thing" used to treat disease or alter the function of the human body. This broad term encompasses chemical products, device products, and combination products.

Indeed, before 1990, the definition of "drug" excluded "devices." But Congress then expanded FDA's authority to encompass regulation of medical devices and combination drug-device products. In doing so, Congress broadened the definition of drug "by striking out … 'but does not include devices or their components, parts, or accessories.'" Safe Medical Devices Act of 1990, Pub. L. No. 101-629, § 16(b), 104 Stat. 4511, 4526 (Nov. 28, 1990). Thus, the current definition of drug encompasses far more than an active pharmaceutical ingredient, because Congress amended it specifically to "enable combination drug/device products to be regulated as drugs." *Genus Med. Techs.*, 427 F. Supp. 3d at 85. The listing statute unequivocally confirms this by stating that both "drug substance (active ingredient)" patents *and* "drug product (formulation or composition)" patents must be listed. 21 U.S.C. § 355(b)(1)(A)(viii).

Congressional intent to expand the definition of "drug" in the Orange Book listing provision is easy to discern, as it contrasts sharply with the definition in the patent term extension provisions. In the latter, Congress authorized extended patent duration for "a patent which claims a product," and defined "product" as "the active ingredient" of a new drug. 35 U.S.C. § 156(a), (f); *see also* 21 U.S.C. § 353(g)(5)(B) (defining "approved drug" "[f]or purposes of this paragraph" as "an active ingredient"). Where

Congress meant to narrowly focus on patents claiming an active ingredient, it said so. And where it meant to broadly include patents claiming an "article," it said so.[11]

2. Congress also specified in the listing provision that the relevant drug—or "article"—is the one "for which the applicant submitted the application." 21 U.S.C. § 355(b)(1)(A)(viii)(I). The "drug" is therefore the actual article or item the applicant submits to the FDA for approval. So, to identify the "drug" for purposes of Orange Book listing, the listing statute requires courts to look to FDA regulations and practice to determine what in fact the FDA approves when it reviews a new drug application.

Turning to the regulations, the "article" that FDA approves is a "drug product." 21 C.F.R. § 314.3(b) (defining an approved "Listed drug" as a "new drug product"). A "drug product" is a "finished dosage form." *Id.* And a "dosage form" is "the physical manifestation containing the active and inactive ingredients that delivers a dose of the drug product." *Id.* This encompasses the drug product's "physical appearance," "physical form," the "way the product is administered," and "design features that affect frequency of dosing." *Id.*

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[11] Both provisions use "claims" to mean "reads on." *See Hoechst-Roussel Pharms., Inc. v. Lehman*, 109 F.3d 756, 759 n.3 (Fed. Cir. 1997) (applying the "reads on" meaning to the patent term extension provision, and holding that a patent did not read on the active ingredient as required under § 156(f)); *see also* 37 C.F.R. § 1.740(a)(9) (a patent is eligible for term extension if it "reads on" the approved product); Patent Listing Requirements Proposed Rule, 67 Fed. Reg. 65448, 65451 (Oct. 24, 2002) ("[*Hoechst*'s] reasoning and conclusion are equally applicable to patent listings.").

Consistent with the listing statute, FDA regulations provide that "[t]he key factor" for whether the listing standard is met "is whether the patent being submitted claims the finished dosage form of the approved drug product." Patent Submission and Listing Requirements, 68 Fed. Reg. 36676, 36680 (June 18, 2003). This makes sense because the finished dosage form is "the drug" the FDA approves. Again, FDA does not approve just an active ingredient, but the drug product as a whole. Combination Products Guidance, *supra* n.6, at 5-6; *see also* 21 U.S.C. § 353(g). When a second applicant, moreover, seeks approval of a generic or follow-on drug, that applicant relies on the first applicant's safety and efficacy studies as to the entire drug product, including not just the active ingredient, but all additional components of the drug product. *See* 21 U.S.C. § 355(j)(2)(A).

3. The listing provision also serves an important notice function and provides "multiple benefits" that would be eliminated by a listing standard limited to patents that recite the active ingredient or the name of the approved drug. As a 2023 GAO report to Congress explained: "All 15 of our stakeholders agreed that the Orange Book may help generic drug sponsors identify relevant patents when making product development decisions and identified multiple benefits." GAO Rpt., *supra* n.5, at 15. Specifically, Orange Book patent listings "[h]elp generic drug sponsors determine how to design or innovate to avoid infringing," "decide how and when to enter the market with a generic product," "resolve patent disputes early, prior to the entry of their generic products onto the market," "prevent generic drug sponsors from being caught up in unexpected,

costly litigation," and decide "which patents to challenge" through Hatch-Waxman litigation for a chance to be the first generic on the market and "receive the benefit of a 180-day exclusivity period." *Id.* at 15-16. If active-ingredient patents were the only ones listed, these benefits would be lost, and it would greatly increase the cost, time, and complexity of patent litigation. Nor is it any answer that generic manufacturers can hire patent counsel to do a non-Orange Book patent search. Patents not disclosing the active ingredient or name of the FDA-approved drug are precisely the patents most difficult to find. An unlisted patent, moreover, does not allow damages- and injunction-free infringement litigation upon filing an ANDA, and there is no 180-day exclusivity period if there is no listed patent.

In short, the text and purpose of the listing statute require courts to look at the actual drug product—the "article," as the statute refers to it, or the "finished dosage form," as the FDA defines it—for which the applicant requested approval. That finished dosage form is "the drug for which the applicant submitted the application." 21 U.S.C. § 355(b)(1)(A)(viii)(I). If a patent reads on that finished dosage form, then it "claims the drug." More precisely, if each claim limitation of an open-ended patent is found in the finished dosage form, then the patent claims the drug and must be listed.

C. A drug-device combination product is a finished dosage form.

FDA has identified and approved many types of dosage forms for approved drug products. These include "tablet[s]" or "solution[s]," 21 C.F.R. § 314.3(b), as well as single-entity drug-device combination products, which include "[p]refilled drug

syringe[s], auto-injectors, metered-dose inhalers, dry powder inhalers, nasal-spray, pumps, transdermal systems, [and] prefilled iontophoresis system[s]."[12] Combination products having primarily a pharmacological mode of action are generally reviewed and approved in a single NDA as a single drug product. *Supra* p.9.

For purposes of Orange Book listing, when FDA approves a combination drug-device product under a single NDA, that product is the finished dosage form, and that product (and its constituent parts) is "the drug for which the applicant submitted the application." 21 U.S.C. § 355(b)(1)(A)(viii). Accordingly, a patent claims an FDA-approved drug-device combination product if it reads on the product. And an open-ended patent reads on a combination product if the patent is directed to a device constituent or a drug constituent, or to components of either constituent, found in the product. That is because an open-ended patent claim "does not exclude additional, unrecited elements." *Multilayer Stretch*, 831 F.3d at 1358.

Separately, the statutory definition of drug expressly includes "a component" of a drug. 21 U.S.C. § 321(g)(1). By definition, then, a component of a drug is itself a drug. For both of those reasons, an open-ended patent claims the drug if it reads on a

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[12] FDA, Combination Product Definition Combination Product Types (Feb. 15, 2018), https://www.fda.gov/combination-products/about-combination-products/combination-product-definition-combination-product-types; *see also* 68 Fed. Reg. at 36680 (finished dosage forms include "metered aerosols, capsules, metered sprays, gels, and pre-filled drug delivery systems," such as "metered dose inhalers and transdermal patches").

drug-device combination product. That holds true regardless of whether the patent is directed to the active ingredient, or whether the finished dosage form contains additional elements not found in the patent.

D. A patent that reads on a drug-device combination product must be listed if it meets the other listing requirements.

Aside from whether a patent claims the drug, the listing statute is limited to patents "for which a claim of patent infringement could reasonably be asserted" against an unlicensed manufacturer of the approved drug, and to "drug substance (active ingredient)" patents or "drug product (formulation or composition)" patents. 21 U.S.C. § 355(b)(1)(A)(viii). The district court did not address these provisions, but they harmonize with the interpretation of "claims the drug" described above, and it is clear that patents such as Teva's inhaler patents or Sanofi's insulin pen patents could satisfy them.

For the infringement requirement, a patent that reads on a drug-device combination product is likely to be infringed by an unlicensed use of that product. *Apotex*, 347 F.3d at 1343-44; *see also* Appellant's Br. 41-42 & n.12 (refuting a surplusage argument in light of differences between infringement and "reads on").

For the "drug substance" or "drug product" requirement, a patent that reads on a finished dosage form but is not directed to an active ingredient is a "drug product patent." *See* Appellant's Br. 51-53. This is confirmed by the FDA regulations from which this language originated. *See* 21 C.F.R. § 314.53. FDA has long referred to "drug

substance" as the active ingredient, and it expressly added "drug product" as a broader term that includes "formulations" and "compositions," the latter of which encompasses any patent that reads on a finished dosage form.[13] Congress imported that meaning into the statute when it codified the regulation in the Orange Book Transparency Act of 2020, Pub. L. No. 116-290, 134 Stat. 4889 (Jan. 5, 2021). And it does not mean that all patents related to a drug must be listed in the Orange Book. For example, "process patents" or "patents claiming packaging," as opposed to a device component, are not drug product patents and cannot be listed. 21 C.F.R. § 314.53(b)(1).

II. Industry Groups Of All Stripes Have Long Understood That Patents Reading On Drug-Device Combination Products Must Be Listed Regardless Of Whether They Recite The Active Ingredient.

The standard described above not only constitutes the best reading of the statute's text, but it best serves the statute's purpose, which is to provide notice to generic manufacturers regarding patents for which they must account when designing their products. That explains why industry groups representing both generic and brand manufacturers have adopted this same position in comments to the FDA.

As one industry group of brand manufacturers stated: "PhRMA recommends that FDA confirm that patents claiming the device constituent of an NDA-approved drug-device combination product or a component thereof—including patents that do

[13] *See* Abbreviated New Drug Application Regulations; Patent and Exclusivity Provisions, 59 Fed. Reg. 50338, 50339, 50343-45, 50361 (Oct. 3, 1994).

not disclose or claim the active ingredient or formulation of the approved drug product—meet the listing standard." PhRMA Comment at 7, FDA-2020-N-1127-0016 (Aug. 31, 2020) (discussing "single-entity drug-device combination products"). This standard, PhRMA said, "aligns with the statute, regulations, and FDA's longstanding view that a patent need not claim all aspects of a finished drug product in order to be required to be listed." *Id.* at 8.

Another group similarly argued that "a patent that claims a device or device component need not also claim or expressly call out the active ingredient in the drug to be considered a patent that 'claims the drug.'" BIO Comment at 7, FDA-2020-N-1127-0015 (Aug. 31, 2020). "If a patent claims a device that is considered a constituent part of a drug-device combination product (or claims a component of such a device), then the patent should be considered one that 'claims the drug' for FDCA § 505(b)(1) patent listing purposes." *Id.*

Generic manufacturers agreed. As one group asserted, "there is a basis to list in the Orange Book information on a drug product or method-of use patent covering a device constituent part, or only a component of a device constituent part, of a combination product; however, to be Orange Book listable, a device-related patent must also 'read on' (*i.e.*, claim or otherwise identify) the approved drug product." AAM Comment at 16, FDA-2020-N-1069-0013 (Aug. 31, 2020); *see also id.* ("A drug product is defined by its dosage form, and … a dosage form has attributes that could be related

to a device (or a component of a device) constituent part, including '[t]he way the product is administered' and '[t]he design features that affect frequency of dosing.'").

Mylan, one of the country's largest generic manufacturers, asserted that "FDA should accept device patents for listing in the Orange Book, but only if the device constituent part of a drug product claimed in the patent is integral to the drug's delivery system"—such as a "pen injector[]"—"and is reviewed and approved as part of the NDA." Mylan Comment at 4-5, FDA-2020-N-1127-0018 (Aug. 31, 2020).

III. The District Court And First Circuit Have Misinterpreted The Statute And Would Eviscerate Hatch-Waxman's Proper Function.

The district court misinterpreted the listing statute because it did not understand that "claims" means "reads on." *See* Appx35-37. The district court's reasoning squarely conflicts with the bedrock principle that the "the recited elements" of an open-ended patent "are only a part of the [invention]," and "the claim does not exclude additional, unrecited elements." *Multilayer Stretch*, 831 F.3d at 1358. An open-ended patent "claims" a product if it "reads on" the product, regardless of whether the product contains "additional, unrecited elements." *Id.* As this Court said in *Apotex*, "a patent must be listed if it contains a product claim that reads on the drug." 347 F.3d at 1344.

The district court described the above analysis as a "confusing set of arguments about the meaning of the word, 'claims.'" Appx37. With all respect, the district court's analysis was confused. Perhaps that is because the word "claims" is used as both a noun and a verb. While the claims (n.) of a patent are the numbered paragraphs that

delineate the subject matter of the invention, it is also true that a patent claims (v.) an invention if all the recited elements are found in the invention. Or perhaps the court was confused about the interrelationship between patent claims and patent infringement. *See Apotex*, 347 F.3d at 1344 ("The listing decision thus requires what amounts to a finding of patent infringement, except that the 'accused product' is the drug that is the subject of the NDA."). Either way, the court missed the clearly stated point—in a case on which the court relied—that "a patent claims an invention when each of the claim limitations reads on, or in other words is found in, the invention." *United Food & Com. Workers Loc. 1776 v. Takeda Pharm. Co. Ltd.*, 11 F.4th 118, 132 (2d Cir. 2021) (cleaned up).

In all fairness to the district court, it was led astray by the First Circuit's erroneous decision in *Lantus*. That court first suggested that Sanofi's patent failed the listing standard because it "does not even mention, much less claim," the active ingredient of insulin glargine. 950 F.3d at 7. This, of course, misidentifies "the drug" for which approval was sought. The drug was the Lantus SoloSTAR—a single-entity drug-device combination product. The court then concluded that, even assuming "Lantus SoloSTAR is a drug under the statute, there is still a vital link missing" because the patent "does not claim or even mention the Lantus SoloSTAR," but instead "claims a device intended for use in an injector pen." *Id.* at 8. This misunderstands what it means to "claim" a product. Where a prefilled injector pen is the product, a patent claims that product if it "reads on" the product—that is, if each recited element is found in the

product. *Multilayer Stretch*, 831 F.3d at 1358; *Apotex*, 347 F.3d at 1343-44. Contrary to the First Circuit's reasoning, a patent directed to a component of the device constituent reads on the product, just like a patent directed to a component of a drug formulation. It makes no difference whether a patent recites every conceivable element of a drug product, or only a component of a drug product. So long as an open-ended patent reads on the product, it satisfies the listing standard.

This is not remotely stretching the meaning of the statute, as the First Circuit erroneously suggested. Instead, the First Circuit's rule untenably narrows the listing statute and could exclude broad categories of patents—not only device patents, but genus patents and formulation patents that have long been listed in the Orange Book. All those types of patents can read on an approved drug and present serious infringement problems for generic manufacturers, without reciting the active ingredient or the name of the approved product. *See* Appellant's Br. at 23-24. This should trouble all stakeholders. Generic manufacturers in particular have a keen interest in obtaining advance notice of such patents. GAO Rpt., *supra* n.5, at 15. The First Circuit's rule guts this notice function and prevents Hatch-Waxman from achieving its objective of resolving patent disputes before a generic manufacturer launches its product, faces preliminary and permanent injunctions, and subjects itself to treble damages for willful infringement. *See supra* pp. 5-7, 18.

IV. The FTC Lacks Authority, Expertise, Or Persuasive Argument.

The Federal Trade Commission filed an amicus brief in the district court purporting to inform the court how to interpret the listing provision. Appx1274-1320. FTC argued that Teva's patents are not listable because they are "device and device component patents untethered from any drug—much less the ProAir HFA albuterol sulfate formulation." Appx1298. FTC's argument appears to use "drug" and "drug product" to mean the active ingredient or a formulation of active and inactive ingredients, such as the "albuterol sulfate formulation." As with the district court and the First Circuit, FTC does not account for the fact that a patent "claims" a product when it "reads on the product," and that a drug-device combination product is "the drug" for which an application is submitted.

The FTC's argument has additional problems. To begin, FTC attempts to override the plain language of the statute to achieve its preferred policy objectives, but FTC lacks authority over drug regulation, the Hatch-Waxman Act, patent construction, or patent law. *See* FTC Act, 15 U.S.C. § 45(a)(2). The FDA is the agency Congress authorized to administer Hatch-Waxman and to review and approve drug applications. *See* 21 U.S.C. § 393. The FDA possesses expertise and authority where FTC does not. Likewise, the PTO and this Court possess expertise and authority over patents and patent law where FTC does not. *See Apotex*, 347 F.3d at 1344 (holding that whether a patent "claims the drug" is a question of patent law).

Tellingly, FTC's current argument cannot be reconciled with its prior position, articulated just two years ago, that "claim" means "reads on." FTC Brief, *Jazz Pharm., Inc. v. Avadel CNS Pharm., LLC*, No. 21-cv-691 (D. Del. filed Nov. 15, 2022) (ECF No. 227). As FTC stated: "To claim the drug for which the NDA was submitted, a patent must contain a product claim that reads on the drug that is the subject of the NDA." *Id.* at 16 n.26 (cleaned up) (quoting *United Food*, 11 F.4th at 132). FTC's brief in this case is conspicuously missing the phrase "reads on." Its shifting positions offer no persuasive value to this Court.

Insofar as FTC raises a policy concern about effects on competition, it should welcome the listing of patents that read on the finished dosage form. That is how generic competitors obtain advance notice of relevant patents, and how infringement issues can be resolved promptly, efficiently, and without the risk of infringement damages. Nor is the 30-month stay problematic, as FTC claims. Congress chose that time as a reasonable estimate of the duration of patent litigation, only one stay is available per generic application regardless of how many patents are asserted in litigation, the stay dissolves if litigation ends before 30 months anyway, and the 180-day generic exclusivity period provides a unique incentive for generic entry that is unavailable when patents are not listed in the Orange Book. 21 U.S.C. § 355(c)(3)(C); 355(j)(5)(B)(iv). Thus, if generic drug manufacturers are deterred by listed patents, that issue is already baked into the design of Hatch-Waxman.

Ultimately, the relevant effects on competition are a function of patent exclusivity, a core principle of incentivizing innovation. Indeed, even if the 30-month stay did not exist, patent ownership and patent law would minimize generic entry through injunctions and damages. And if FTC's actual concern is about patent quality, those are questions for the patent system. *See* GAO Rpt., *supra* n.5, at 20 (discussing arguments that "the U.S. Patent and Trademark Office sometimes grants certain patents, such as those for minor changes to the drug, that create barriers for generic entry," and "these patents play a larger role in delaying the entry of generic products into the market than Orange Book patent listings"). An argument about the PTO's patent issuing standards is no basis for distorting the careful and successful balance Congress struck with Hatch-Waxman.

CONCLUSION

This Court should confirm that a patent "claims the drug" under 21 U.S.C. § 355(b)(1)(A)(viii) if it "reads on" the drug product approved by the FDA, including a drug-device combination product.

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Respectfully submitted,

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CERTIFICATE OF COMPLIANCE

I hereby certify that this brief complies with the typeface requirements of Fed. R. App. P. 32(a)(5); the type-style requirements of Fed. R. App. P. 32(a)(6); and the type-volume limitations of Fed. R. App. P. 29(a)(5) and Fed. Cir. R. 29(b) and 32(b)(1), because it is proportionally spaced, has a typeface of 14-point Garamond font, and contains 6,906 words, excluding the parts of the brief exempted by Fed. R. App. P. 32(f) and Fed. Cir. R. 32(b)(2).

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CERTIFICATE OF SERVICE

I hereby certify that I electronically filed the foregoing on the CM/ECF system, which will send a notification of such filing to the appropriate counsel.

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