IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

ASTELLAS PHARMA INC., ASTELLAS IRELAND CO., LTD., and ASTELLAS PHARMA GLOBAL DEVELOPMENT, INC., Plaintiffs, vs. ASCENT PHARMACEUTICALS, INC., MSN PHARMACEUTICALS INC., and MSN LABORATORIES PRIVATE LIMITED, Defendants.	**1:23CV486** **MEMORANDUM & ORDER**

This matter is before the Court after a bench trial from October 27, 2025, to October 31, 2025. This is a patent infringement action brought under the Hatch-Waxman Act, 21 U.S.C. § 355, *et seq.* Defendant Ascent Pharmaceuticals, Inc. ("Ascent" or "Defendant") filed an Abbreviated New Drug Application ("ANDA"), No. 218172, with the Food and Drug Administration ("FDA"), seeking approval to engage in the manufacturing and sale of a generic version of the plaintiffs' Myrbetriq® (mirabegron extended-release tablets) brand product, which is indicated for treatment of overactive bladder (OAB). The plaintiffs, Astellas Pharma Inc., Astellas Ireland Co., Ltd., and Astellas Pharma Global Development, Inc. (collectively, "Astellas") allege that Ascent's ANDA infringes its patents, United States Patent Nos. 10,842,780 ("the '780 Patent"), 11,707,451 ("the '451 Patent"), 12,059,409 ("the '409 Patent"), and 12,097,189 ("the '189 Patent") (collectively, "the Asserted Patents"). Ascent challenges the validity of Astellas's patents.

I. REGULATORY BACKGROUND

The Hatch-Waxman Act was passed in 1984 to respond to two problems created by the statutes that then regulated patents and pharmaceuticals. *Eli Lilly & Co. v. Medtronic,*

Inc., 496 U.S. 661, 669 (1990). The first arose from the fact that inventors ordinarily applied for patent protection for newly discovered drugs well before securing regulatory approval, even though marketing was prohibited until regulatory approval was obtained. *Warner-Lambert Co. v. Apotex Corp.*, 316 F.3d 1348, 1357 (Fed. Cir. 2003). Because the FDA generally took much longer to approve a New Drug Application ("NDA") than the Patent and Trademark Office ("PTO") took to grant a patent, the seventeen-year patent term was substantially eroded by the time the patentee could market its product obtain the benefit of his invention. *Id.*

The second problem was the requirement that a generic manufacturer obtain its own separate NDA in order to market its product. *Id.* At that time, manufacturing or using a patented product solely for the purpose of conducting tests and developing the necessary information to apply for regulatory approval later was an act of infringement under 35 U.S.C. § 271(a). *Id.* Because it took a substantial amount of time for a generic manufacturer to obtain data and secure regulatory approval, requiring those manufacturers to wait until after the patent expired to begin testing and other pre-approval activities resulted in a de facto extension of the patent term. *Id.*

The Hatch-Waxman Act was designed to address both of these problems by restoring time lost to innovators during pre-patent testing and regulatory approval, while at the same time enabling generic manufacturers to be ready to enter the market once the patents expired. *Id.* To further the overall goal of getting generics to market faster, Hatch-Waxman authorized the filing and approval of ANDA and provided a mechanism through which patent-holders could adjudicate patent infringement claims prior to a product coming on the market. *Id.*; *Sunovion Pharms., Inc. v. Teva Pharms. USA, Inc.*, 731 F.3d 1271, 1279 (Fed. Cir. 2013) (noting that the Hatch-Waxman framework envisions resolution of the infringement issue

earlier, and generally before ANDA approval). Under Hatch-Waxman, generic manufacturers had to show bioequivalence to a patented drug but no longer had to prove the safety and efficacy of a generic version, they could effectively "piggy-back" on the patent holder's showing of safety and efficacy. Generic manufacturers are also allowed to test and seek approval to market the generic formulation during the patent term. *Id.*

Under the infringement adjudication mechanism of the Act, patentees and NDA holders are required to list patents that claim the approved drug or its approved use in the FDA's *Approved Drug Products with Therapeutic Equivalence Evaluations* publication (the "Orange Book"). *Id.*; *see* 21 U.S.C. § 355(b)(1). ANDA applicants are required to either certify that no unexpired patent is listed for its proposed generic formulation, or that the listed patent is either invalid or would not be infringed by the manufacture, use, or sale of the drug by the ANDA applicant ("a paragraph IV certification"). *Id.*; 21 U.S.C. § 355(j)(2)(A)(I-IV).

The filing of an ANDA with a paragraph IV certification constitutes an act of artificial patent infringement under 35 U.S.C. § 271(e)(2)(A), which allows litigation to commence before actual sale of an accused product has occurred. *Vanda Pharms. Inc. v. W.-Ward Pharms. Int'l Ltd.*, 887 F.3d 1117, 1126 (Fed. Cir. 2018); *see also Sunovion Pharmaceuticals, Inc.*, 731 F.3d at 1279 ("Although no traditional patent infringement has occurred until a patented product is made, used, or sold, under the Hatch-Waxman framework, the filing of an ANDA itself constitutes a technical infringement for jurisdictional purposes"). Patent holders benefit from the Act because the patent term was extended for products subject to a regulatory review before commercial marketing or use, if the permission for the commercial marketing or use of the product after such regulatory review period was the first permitted commercial marketing or use of the product. *Id.* at 1358.

II. FINDINGS OF FACT

A. Background

This is an action alleging patent infringement of United States Patent Nos. 10,842,780 (the "'780 Patent"), 11,707,451 (the "'451 Patent"), 12,059,409 (the "'409 Patent") and 12,097,189 (the "'189 Patent") (collectively, "the Asserted Patents"), arising under the United States patent laws, Title 35, United States Code. This action relates to the ANDAs submitted by the below-named Defendants under Section 505(j) of the FDCA, 21 U.S.C. § 355(j), seeking Food and Drug Administration ("FDA") approval to market generic pharmaceutical products. D.I. 332-1 at 2, ¶ 1.

i. The Parties

Plaintiff Astellas Pharma Inc. ("API") is a corporation organized and existing under the laws of Japan, having its principal place of business at 2-5-1, Nihonbashi-Honcho, Chuo-Ku, Tokyo 103-8411, Japan. API was formed on April 1, 2005, from the merger of Yamanouchi Pharmaceutical Co., Ltd. and Fujisawa Pharmaceutical Co., Ltd. D.I. 332-1 at 2, ¶ 2. Plaintiff Astellas Ireland Co., Ltd. ("AICL") is a corporation organized and existing under the laws of Ireland, having its principal place of business at Damastown Road, Damastown Industrial Park, Mulhuddart, Dublin 15, Ireland. AICL is a subsidiary of Plaintiff API. D.I. 332-1 at 2, ¶ 3. Plaintiff Astellas Pharma Global Development, Inc. ("APGD") is a corporation organized and existing under the laws of the State of Delaware, having its principal place of business at 1 Astellas Way, Northbrook, Illinois 60062. APGD is a subsidiary of Plaintiff API. D.I. 332-1 at 2, ¶ 4. Defendant Ascent Pharmaceuticals, Inc. is a corporation organized and existing under the laws of the State of New York, having a principal place of business at 400 South Technology Drive, Central Islip, New York 11722. D.I. 332-1 at 3, ¶ 5.

Plaintiff API is the record owner and assignee of the Asserted Patents. D.I. 329 at 3–4 (Ascent stipulating that API is the record owner and assignee for the '780 Patent); D.I. 335 (Court's Order taking judicial notice and admitting into evidence PTX-746–55). Plaintiff AICL is the exclusive licensee of the Asserted Patents with the rights to develop, import, market, sell, distribute, and promote any and all pharmaceutical formulations in finished package forms which contain mirabegron as the active ingredient in the United States. D.I. 335 (Court's Order admitting into evidence PTX-762–63). Plaintiff APGD is the holder of NDA No. 202611 for Myrbetriq® extended-release tablets, 25 mg and 50 mg strengths, which contain the active ingredient mirabegron. D.I. 335 (Court's Order admitting into evidence PTX-208 and PTX-592).

ii. The Asserted Patents

Astellas has alleged infringement of the '780 Patent, the '451 Patent, the '409 Patent, and the '189 Patent against Ascent. D.I. 332 ¶ 4; D.I. 1; C.A. No. 24-1084, D.I. 1. The Asserted Patents will expire on September 28, 2029, with pediatric exclusivity extending through March 28, 2030. D.I. 354 at 101–02.

iii. The Court's Claim Constructions

A *Markman* hearing was held in the related C.A. No. 23-819 litigation on August 21, 2024. *See* Hr'g Tr., C.A. No. 23-819 D.I. 349. The Court entered a Claim Construction Order on October 30, 2024 (C.A. No. 23-819, D.I. 362) construing certain terms of the '451 Patent. D.I. 332-1 at 5, ¶ 24.

A *Markman* hearing was held in the present litigation on June 13, 2024. The Court entered a Claim Construction Order on August 15, 2024, construing certain terms of the '780 Patent. D.I. 72; D.I. 332-1 at 5, ¶ 25.

Astellas and Ascent stipulated that they would adhere to the Court's prior ruling in (D.I. 72) holding that the term "hydrogel-forming polymer" in the '409 Patent should be given its plain and ordinary meaning (D.I. 162). D.I. 332-1 at 5, ¶ 26.

A *Markman* hearing was held in the related C.A. No. 20-1589 litigation on May 16, 2025. The Court entered a Claim Construction Order on June 10, 2025 (C.A. No. 20-1589, D.I. 821) construing certain terms of the '189 Patent. D.I. 332-1 at 5, ¶ 27.

The Court ordered that the term "hydrogel-forming polymer" in the '780 Patent be given its plain and ordinary meaning. D.I. 332-1 at 6, ¶ 28. The Court ordered that the term "means for forming a hydrogel" in the '780 Patent be given its plain and ordinary meaning. D.I. 332-1 at 6, ¶ 29. The Court held that the terms "hydrogel-forming polymer" and "means for forming a hydrogel" were not limited to polyethylene oxide. D.I. 332-1 at 6, ¶ 30. The Court held that the '780 Patent's intrinsic evidence does not demonstrate a clear and unmistakable disclaimer. D.I. 332-1 at 6, ¶ 31.

The Court ordered that the term "hydrogel-forming polymer" in the '409 Patent be given its plain and ordinary meaning. D.I. 332-1 at 6, ¶ 32.

The Court ordered that the term "reduced food effect" in the '451 Patent means "[a] clinically significant reduction, where the reduction is expressed by a positive percent reduction in the rate of decrease of Cmax and AUC, in a change in mirabegron absorption measured as a difference in Cmax and AUC in the fed and fasted states associated with the sustained release formulation as compared to a difference in Cmax and AUC in the fed and fasted states associated with an immediate release formulation." D.I. 332-1 at 6, ¶ 33.

The Court ordered that the term "Immediate Release Formulation" in the '451 Patent means the "Immediate release formulation of Comparative Example 1." D.I. 332-1 at 6, ¶ 34. The Court ordered that the term "Continuous drug release for at least four hours after

oral administration" in the '451 Patent be given its plain and ordinary meaning (continuous drug release for at least four hours in vivo after oral administration). D.I. 332-1 at 6, ¶ 35.

The Court ordered that the term "Continuous drug release for at least four hours after oral administration" in the '189 Patent be given its plain and ordinary meaning. D.I. 332-1 at 6, ¶ 36. The Court ordered that the term "Immediate Release Formulation" in the '189 Patent means the "Immediate release formulation of Comparative Example 1." D.I. 332-1 at 7, ¶ 37. The Court ordered that the term "a hydrogel-forming polymer" in the '189 Patent be given its plain and ordinary meaning. D.I. 332-1 at 7, ¶ 38.

The Court ordered that the term "reduced food effect" in the '189 Patent means "[a] reduction in a change in mirabegron absorption, where the reduction is a 10% or more reduction in the rate of decrease of Cmax measured as a difference in Cmax in the fed and fasted states associated with the sustained release formulation as compared to a difference in Cmax in the fed and fasted sates associated with an immediate release formulation." D.I. 332-1 at 7, ¶ 39.

B. Infringement

Neither Ascent nor any of its experts contest infringement of any limitation of the Asserted Claims apart from: (1) the requirement of a "dissolution rate of 39% or less after 1.5 hours" in Claims 9, 13, and 20 of the '780 Patent and Claim 5 of the '409 Patent; and (2) the identity of the active ingredient in the immediate release comparator recited in Claims 5 and 6 of the '451 Patent and Claims 4 and 19 of the '409 Patent. *See* D.I. 332-3 at 39–40.

i. The '780 Patent

Astellas has asserted infringement of Claims 9, 13, and 20 of the '780 Patent against Ascent. D.I. 332 at 8, ¶ 10; D.I. 332-1 at 7, ¶ 40.

Each asserted claim of the ’780 patent requires that the “drug dissolution rate from the pharmaceutical composition is 39% or less after 1.5 hours and at least 75% after 7 hours.”

ii. The ’409 Patent

Astellas has asserted infringement of Claim 5 of the ’409 Patent against Ascent. D.I. 332 at 8, ¶ 13; D.I. 332-1 at 7, ¶ 40.

Each asserted claim of the ’409 patent requires that the “drug dissolution rate from the pharmaceutical composition is 39% or less after 1.5 hours and at least 75% after 7 hours.”

iii. The ’451 Patent

Astellas has asserted infringement of Claims 5 and 6 of the ’451 Patent against Ascent. D.I. 332 at 8, ¶ 13; D.I. 332-1 at 7, ¶ 40. The asserted claims are dependent claims 5 and 6 of the ’451 patent. The asserted claims of the ’451 patent require a “reduced food effect” in comparison to an “immediate release formulation.” The Court construed “reduced food effect” in the ’451 patent as “[a] clinically significant reduction, where the reduction is expressed by a positive percent reduction in the rate of decrease of Cmax and AUC, in a change in mirabegron absorption measured as a difference in Cmax and AUC in the fed and fasted states associated with the sustained release formulation as compared to a difference in Cmax and AUC in the fed and fasted states associated with an immediate release formulation.” D.I. 332-1 at 6, ¶ 33. The Court ordered that the term “Immediate Release Formulation” in the ’451 Patent means the “Immediate release formulation of Comparative Example 1.” D.I. 332-1 at 6, ¶ 34.

iv. The ’189 Patent

Astellas has asserted infringement of Claims 4 and 19 of the ’189 Patent against Ascent. D.I. 332 at 8, ¶ 13; D.I. 332-1 at 7, ¶ 40. The asserted claims are dependent claims 4 and 19 of the ’189 patent. The asserted claims of the ’189 patent require a “reduced food effect” in comparison to an “immediate release formulation.” The Court construed the term “reduced food effect” in the ’189 patent as “a reduction in a change in mirabegron absorption, where the reduction is a 10% or more reduction in the rate of decrease in Cmax measured as a difference in Cmax in the fed and fasted states associated with the sustained release formulation as compared to a difference in Cmax in the fed and fasted states associated with an immediate release formulation.” D.I. 332-1 at 7, ¶ 39. The Court ordered that the term “Immediate Release Formulation” in the ’189 Patent means the “Immediate release formulation of Comparative Example 1.” D.I. 332-1 at 7, ¶ 37.

C. Invalidity

i. Patent-Eligible Subject Matter

“Claims 9 and 13 of the ’780 Patent and claim 5 of the ’409 Patent (collectively, “the Composition Claims”) recite sustained-release pharmaceutical compositions of specific doses of mirabegron comprising polyethylene glycol and polyethylene oxide, and exhibiting a specific dissolution profile. *See* JTX-1.16–17; JTX-3.22.” D.I. 369 at 13. “Claim 20 of the ’780 Patent, claims 5 and 6 of the ’451 Patent, and claims 4 and 19 of the ’189 Patent (collectively, “the Method Claims”) recite methods of treating overactive bladder by administering hydrogel-forming formulations containing specific doses of mirabegron and either exhibiting a specific dissolution profile (as in claim 20 of the ’780 Patent) or a specified in vivo release profile (as in the asserted claims of the ’451 and ’189 Patents). *See* JTX-1.17; JTX-2.37–38; JTX-4.41–42. The asserted claims of the ’451 and ’189 further require

that the claimed formulations exhibit a reduced food effect as compared to an immediate release mirabegron formulation. *See* JTX-2.37–38; JTX-4.41–42." D.I. 369 at 13.

At trial, Professor William Elmquist testified on behalf of Ascent. D.I. 354 at 103. He is a Distinguished Professor in the Department of Pharmaceutics at the University of Minnesota. D.I. 354 at 104. He has a Doctor of Pharmacy from the University of Minnesota, and a Ph.D. in Pharmaceutics from the University of Minnesota. D.I. 354 at 104. He has been on faculty at the University of Minnesota for 23 years. D.I. 354 at 106. Professor Elmquist's specialty within the field of pharmaceutics is pharmacokinetics, the study of production, distribution, tablets absorption, secretion of drugs, and in particular the distribution of drugs to the brain. D.I. 354 at 107.

Professor Elmquist testified that he was familiar with the article "Transit of Pharmaceutical Dosage Forms Through the Small Intestine," and explained that the article is showing the overall mean transit time through the small intestine to be approximately three or four hours. D.I. 354 at 117. Professor Elmquist also stated that he performed an analysis to see if the claims directed to patentable subject matter. D.I. 354 at 118. He testified that the required dissolution profile came from data that actually mirrored the transit time through the small intestine. D.I. 354 at 118. And that transit time through the small intestine is a natural phenomenon. D.I. 354 at 119. He also testified that the "the claims are actually quite ordinary, quite conventional in terms of making the sustained-release formulation," and concluded that the asserted patents were unpatentable. D.I. 354 at 121.

On cross examination, Professor Elmquist testified "that a pharmaceutical composition is not a law of nature or natural phenomenon; mirabegron is not a naturally occurring substance; many of the excipients in the claimed formulations are manmade; and

that as a whole, the independent claim of the '780 Patent "is describing what is a manmade composition or not naturally occurring composition." D.I. 354 at 137–39; D.I. 369 at 13.

At trial, Dr. Steven R. Little testified on behalf of Astellas. D.I. 354; D.I. 356. Dr. Little testified live at trial as an expert in pharmaceutical science and the formulation characterization of solid pharmaceutical dosage forms. D.I. 354 at 6. He has a bachelor's degree in chemical engineering from Youngstown State, and a Ph.D. from MIT. D.I. 354 at 4. Dr. Little currently works at the University of Pittsburgh and has worked there since 2006. D.I. 354 at 4. His research focus is pharmaceutical formulation and drug delivery. D.I. 354 at 5.

Dr. Little testified that he performed an analysis to see if the claims are directed to patentable subject matter. D.I. 356 at 152. He testified that his analysis was the same for all of the Composition Claims. D.I. 356 at 153. Dr. Little testified that the Composition Claims are directed to a pharmaceutical composition, a tablet requiring specific nonnatural drug, specific nonnatural excipients with particular characteristics at a specific dose, with a specific claimed dissolution profile resulting from a nonnatural composition. D.I. 356 at 153. He concluded that the Composition Claims are not directed to a law of nature or natural phenomenon. D.I. 356 at 153.

Dr. Little also testified that the Method Claims are "directed to a specific method of treatment requiring a specific medical condition, a specific group of patients, a specific dose, a specific nonnatural drug, specific nonnatural excipients with particular characteristics, a specific profile, and specific change in pharmacokinetics resulting from nonnatural compositions." D.I. 356 at 154. He concluded that the Method Claims are not directed to a natural phenomenon or law of nature. D.I. 356 at 154.

ii. Anticipation

Ascent asserts that U.S. Patent No. 6,699,503 ("the '503 Patent") anticipates claim 20 of the '780 Patent and all asserted claims of the '409, '451, and '189 Patents. D.I. 349 at 30. The '503 Patent was considered during prosecution of all four of the Asserted Patents. *See* JTX-1.2; JTX-2.3; JTX-3.2; JTX-4.3. The priority date of the '780 and '409 Patents is September 30, 2008. *See* JTX-1.2; JTX-3.2. The priority date of the '451 and '189 Patents is March 29, 2010. *See* JTX-2.2; JTX-4.2. Astellas's submission of the '503 Patent to be listed in the FDA Orange Book for Myrbetriq is dated July 30, 2012, and is thus not prior art to the Asserted Patents. DTX-71.3. Inventor Yuuki Takaishi's declaration during prosecution of a predecessor application to the '780 and '409 Patents was submitted on February 10, 2016, and is thus not prior art to the Asserted Patents. DTX-122.3.

At trial, Professor Alekha Dash testified on behalf of Ascent. D.I. 355 at 18. He has a Ph.D. in Pharmaceutics and is a professor of pharmacy at Creighton University. D.I. 355 at 18. He has been at Creighton for 35 years. D.I. 355 at 18. Dr. Dash reviewed U.S. Patent No. 6,699,503 ("the '503 patent"), which was admitted as DTX-6. Dr. Dash testified that there were three basic components for the invention that is disclosed in the '503 patent: a drug, an additive, and a hydrogel-forming polymer. D.I. 355 at 23. Dr. Dash testified that a POSA would understand that the '503 invention is capable of sustaining the efficacy of the drug in terms of keeping the drug concentration in the therapeutic window without spiking into toxic concentrations. D.I. 355 at 52. He also testified that the '503 patent is very broad, is not limited to a particular drug, and it can be any drug which is needed to be designed to be sustained-release formulation. D.I. 355 at 26.

On cross-examination, Dr. Dash admitted that a POSA as of the Asserted Patents' priority dates would not understand the '503 Patent to disclose mirabegron. D.I. 355 at 212.

Because the ’503 Patent makes no mention of mirabegron, it also does not disclose a tablet comprising specifically 10 to 200 mg of mirabegron, as required by claim 20. *See* D.I. 355 at 212–13; D.I. 356 at 76. Dr. Dash also testified that the ’503 Patent does not disclose a method of treating overactive bladder, nor do its disclosed formulations necessarily require the treatment of overactive bladder. *See* D.I. 355 at 105, 213–14; D.I. 356 at 76.

1. Claim 20 of the ’780 Patent

Ascent conceded at trial that claims 9 and 13 are not anticipated by the ’503 Patent. *See* D.I. 353 at 104–05, 107. The ’503 Patent does not expressly disclose mirabegron as required by claim 20. The ’503 Patent discloses a list of exemplary drugs that can be used with its claimed invention, but that list does not include any β3-agonist, much less mirabegron. *See* DTX-6.14–15; D.I. 355 at 212; D.I. 356 at 72.

2. Claim 5 of the ’409 Patent

As discussed above with respect to claim 20 of the ’780 Patent, the ’503 Patent does not disclose—either expressly or inherently—mirabegron, a tablet comprising between 10 and 200 mg of mirabegron, or the claimed dissolution profile for mirabegron as required by claim 5.

3. Claims 5 and 6 of the ’451 Patent

As discussed above with respect to the claims of the ’780 and ’409 Patents, the ’503 Patent does not disclose—either expressly or inherently—mirabegron or a method of treating overactive bladder, as required by claims 5 and 6. Additionally, Dr. Dash testified that Example 2 of the ’503 Patent compares the Cmax and AUC of an immediate-release formulation with a sustained release formulation of nicardipine hydrochloride. *See* D.I. 355 at 47–48. However, Example 2 expressly states that it used a sustained-release formulation with an immediate-release coating—not an immediate-release formulation—to compare

Cmax and AUC between fasted and fed states for a second sustained-release formulation. *See* DTX-6.22; D.I. 356 at 124–25. Dr. Dash testified that the ’503 Patent does not disclose a sustained-release formulation that reduces mirabegron’s food effect in comparison to an immediate-release mirabegron formulation. *See* D.I. 355 at 214; D.I. 356 at 75–76.

4. Claims 4 and 19 of the ’189 Patent

As discussed above with respect to the claims of the ’780, ’409, and ’451 Patents, the ’503 Patent does not disclose—either expressly or inherently—mirabegron or a method of treating overactive bladder, as required by claims 4 and 19. Claim 4 requires a tablet comprising 25 mg of mirabegron, whereas claim 19 requires a 50 mg mirabegron tablet. JTX-4.41–42. As discussed above with respect to the claims of the ’451 Patent, the ’503 Patent does not disclose a reduced food effect for a sustained-release mirabegron formulation as compared with an immediate-release formulation, much less the 10% decrease required by claims 4 and 19.

iii. Obviousness

In its challenge to the validity of the patents, Ascent contends that the Asserted Claims/Patents would have been obvious to a person of ordinary skill in the art as of the priority date in light of several combinations of prior art references.

First, Ascent relies on the prior art combination of Takasu ’540 Patent, the ’503 Patent, and specific examples from Michel and Chapple. Second, Ascent relies on the combination of Takasu ’540, the ’503 Patent, and the ’375 Patent. Third, Ascent relies on the combination of Takasu ’540, the ’503 Patent, Sako ’602 and Sako ’603. The ’503 Patent, Takasu ’540, Sako ’602, and Sako ’603 were all considered by the Examiner during prosecution of each of the Asserted Patents. *See* JTX-1.2; JTX-2.3; JTX-3.2; JTX-4.3; D.I. 355 at 204–05; D.I.

356 at 65–66, 86. The ’375 Patent was considered by the Examiner during prosecution of the ’409 and ’189 Patents. *See* JTX-3.2; JTX-4.3.

1. The ’503 Patent

As discussed above with respect to anticipation, the ’503 Patent does not disclose mirabegron; a method of treating overactive bladder; a specific dose of mirabegron to be administered; and food effect comparison between a sustained-release and an immediate-release formulation of any drug, including mirabegron. The ’503 Patent also does not disclose side or food effects associated with mirabegron. *See* D.I. 355 at 208–09; D.I. 356 at 76.

Dr. Little testified that a POSA would not view the ’503 Patent as encouraging use with any drug, but that instead a “person of ordinary skill in the art would understand that you would have to see whether a drug is compatible with the release system.” D.I. 356 at 72–73.

The ’503 Patent is directed to providing favorable sustained release of a drug through to the colon. *See* DTX-6.14; D.I. 355 at 216; D.I. 356 at 112. The ’503 Patent’s specification explains that while a “[a] variety of hydrogel-type preparations have heretofore been proposed for realizing sustained release of drugs . . . all of these preparations . . . are not intended to provide for a release of the drug in the lower digestive tract, typically in the colon, where little water is available.” DTX-6.14.

2. Takasu ’540

Takasu ’540 does not disclose OCAS or other sustained-release formulations of mirabegron, D.I. 355 at 233; D.I. 356 at 93–94; a food effect associated with immediate-release formulations of mirabegron, or methods of reducing such a food effect, D.I. 355 at 233; D.I. 356 at 93–94; dissolution or release profiles for mirabegron, D.I. 356 at 93–94;

administering specifically 25 mg or 50 mg doses of mirabegron, D.I. 355 at 230; D.I. 356 at 94; and a formulation of mirabegron that comprises polyethylene oxide and polyethylene glycol, D.I. 356 at 93–94.

3. Sako ’602 and Sako ’603

U.S. Patent Pub. Nos. 2005/0100602 (“Sako ’602”) and 2005/0100603 (“Sako ’603”) share the same specification and thus similar disclosures. *See generally* DTX-2; DTX-8; *see also* D.I. 356 at 128. Sako ’602 and ’603 do not disclose or suggest: mirabegron, including 25, 50, or 10–200 mg doses of mirabegron, D.I. 355 at 234; D.I. 356 at 133–34; methods of treating overactive bladder, D.I. 356 at 133–34; food or side effects associated with immediate-release mirabegron formulations, D.I. 355 at 235–36; D.I. 356 at 133–34; food effect comparison between any immediate-release and sustained-release formulation, D.I. 356 at 133–34; and target dissolution profiles for mirabegron, D.I. 355 at 236; D.I. 356 at 133–34.

4. The ’375 Patent

Ascent asserted U.S. Patent No. 6,562,375 (“the ’375 Patent”) as a primary reference only as to the obviousness of claim 13 of the ’780 Patent. *See* D.I. 355 at 140–41. The ’375 Patent does not disclose mirabegron or any dosage, food effects, or cardiovascular side effects associated with mirabegron formulations. *Id.* at 236–37.

5. Chapple

Ascent asserted DTX-13, Christopher R. Chapple, *The Development of Oral Controlled Absorption Systems (OCAS®): A New Improved Formulation of Tamsulosin*, 4 Eur. Urology Supps. 1 (2005), hereinafter “Chapple,” as a background art reference. D.I. 355 at 115–19. Chapple was considered by the Examiner during the prosecution of each Asserted Patent. *See* JTX-1.4; JTX-2.4; JTX-3.8; JTX-4.11.

Chapple does not disclose or suggest: mirabegron, including 25, 50, or 10–200 mg doses of mirabegron, D.I. 355 at 242–43; D.I. 356 at 139; methods of treating overactive bladder, D.I. 356 at 139; a food effect or any side effect associated with immediate-release mirabegron formulations, D.I. 356 at 139; food effect comparison between any immediate-release and sustained-release formulation, D.I. 356 at 139; and target dissolution or release profiles for mirabegron, D.I. 356 at 139.

6. Michel

Ascent asserted DTX-5, Martin C. Michel et al., *The Pharmacokinetic Profile of Tamsulosin Oral Controlled Absorption System (OCAS®)*, 4 Eur. Urology Supps. 15 (2004), hereinafter "Michel," as a background art reference. D.I. 354 at 215; D.I. 355 at 241. Michel was considered by the Examiner during the prosecution of each Asserted Patent. *See* JTX-1.4; JTX-2.4; JTX-3.6; JTX-4.8.

Michel does not disclose or suggest: mirabegron, including 25, 50, or 10–200 mg doses of mirabegron, D.I. 355 at 241; D.I. 356 at 139; methods of treating overactive bladder, D.I. 356 at 139; a food effect or any side effect associated with immediate-release mirabegron formulations, D.I. 356 at 139; food effect comparison between any immediate-release and sustained-release formulation, D.I. 356 at 139; and target dissolution or release profiles for mirabegron, D.I. 356 at 139.

7. Prior Art and Invention Claimed

a. POSA's Motivation to Combine Ascent's Asserted Obviousness References as of the Priority Dates of the Asserted Patents

As of the priority dates of the Asserted Patents, no pharmaceutical formulation of mirabegron—or any other β3-agonist—existed on the market. D.I. 353 at 129. Myrbetriq®—a sustained-release formulation of mirabegron—was the first β3-agonist to be approved by

the FDA, and received approval in 2012, years after the priority dates of the Asserted Patents. D.I. 353 at 129; D.I. 356 at 17, 39, 97.

Sustained-release formulations presented the additional challenge of introducing unpredictable side effects. *See* PTX-212.5; D.I. 356 at 97–98, 143. As of the priority dates of the Asserted Patents, it was known in the art that sustained-release formulations of certain drugs, such as clarithromycin (sold under the trade name BIAXIN), could introduce food effects that did not accompany their immediate-release equivalents. PTX-418.3–4; D.I. 356 at 98, 144.

Food effects are complex phenomena that are influenced by a variety of factors. *See* PTX-212.5; D.I. 354 at 150; D.I. 356 at 80. It was understood as of the priority dates of the Asserted Patents that a food effect or its magnitude and direction (positive or negative) could not be predicted for a particular drug. D.I. 353 at 189; D.I. 356 at 143. Indeed, in 2002, the FDA's Food Effect Guidance explained that for "immediate-release drug products (BCS Class II, III, and IV) and for all modified-release drug products, . . . the relative direction and magnitude of food effects on formulation BA [bioavailability] and the effects on the demonstration BE [bioequivalence] are difficult, if not impossible, to predict without conducting a fed BE study." PTX-212.5.

As for the priority dates of the Asserted Patents, a POSA would not have known that immediate release mirabegron formulations exhibited a food effect. *See* D.I. 354 at 152; D.I. 355 at 208; D.I. 356 at 102. Nor would they have known that immediate release mirabegron formulations were associated with cardiovascular side effects. *See* D.I. 354 at 152; D.I. 355 at 208–09; D.I. 356 at 96–97.

As of the priority dates of the Asserted Patents, it was known that mirabegron has a half-life in the human body of approximately 24 hours, i.e., half the concentration of

mirabegron absorbed from the gastrointestinal tract remains in the bloodstream after approximately 24 hours. *See* PTX-443.1; D.I. 356 at 90–91. Mirabegron's half-life was known to be relatively long compared to those of other drugs like tamsulosin. *See* D.I. 356 at 138–39. A POSA would have understood that mirabegron's long half-life to mean that mirabegron could be administered once-daily in its immediate-release form, and that a sustained-release formulation was not necessarily needed. *See* D.I. 356 at 91.

Sako '602 and '603 explain that conventional sustained-release tamsulosin formulations—"the type[s] of sustained-release formulations that release[] in the upper GI tract [—were] shown to have a food effect." D.I. 356 at 129; *see also* DTX-2.1; DTX-8.1. Because a POSA would have understood that mirabegron BCS Class III drugs like mirabegron exhibit "regional-dependent absorption, with better absorption in the upper small intestine," DTX-10.14, Sako '602 and '603 would have discouraged them from pursuing a sustained-release formulation of mirabegron in the first place.

b. POSA's Reasonable Expectation of Success of Reaching the Claimed Invention as of the Priority Dates of the Asserted Patents

The disclosures of the '503 Patent would not have provided a POSA with a reasonable expectation of success that sustained-release mirabegron would have a reduced food effect because the '503 Patent discloses exemplary formulations of acetaminophen and nicardipine hydrochloride—not mirabegron—and food-effects are highly drug-specific. *See* DTX-6.5; D.I. 354 at 152; D.I. 356 at 39, 80. Moreover, the '503 Patent provides no comparative pharmacokinetic data between any immediate-release and sustained-release formulation. *See* D.I. 355 at 214.

Michel, and Chapple likewise would not have conferred a POSA with a reasonable expectation of success of combining the Takasu '540 and the '503 Patent because Michel

and Chapple disclose OCAS formulations using tamsulosin—not mirabegron—as the active ingredient. *See* D.I. 356 at 39. Moreover, all of these references disclosed a reduced food effect in OCAS formulations as compared to conventional sustained-release tamsulosin formulations, providing a POSA with no understanding as to (1) whether immediate-release tamsulosin even exhibits a food effect, and (2) if such a food effect existed, whether OCAS formulations of tamsulosin reduced that food effect. *See* D.I. 356 at 139–40.

8. Objective Indicia of Nonobviousness

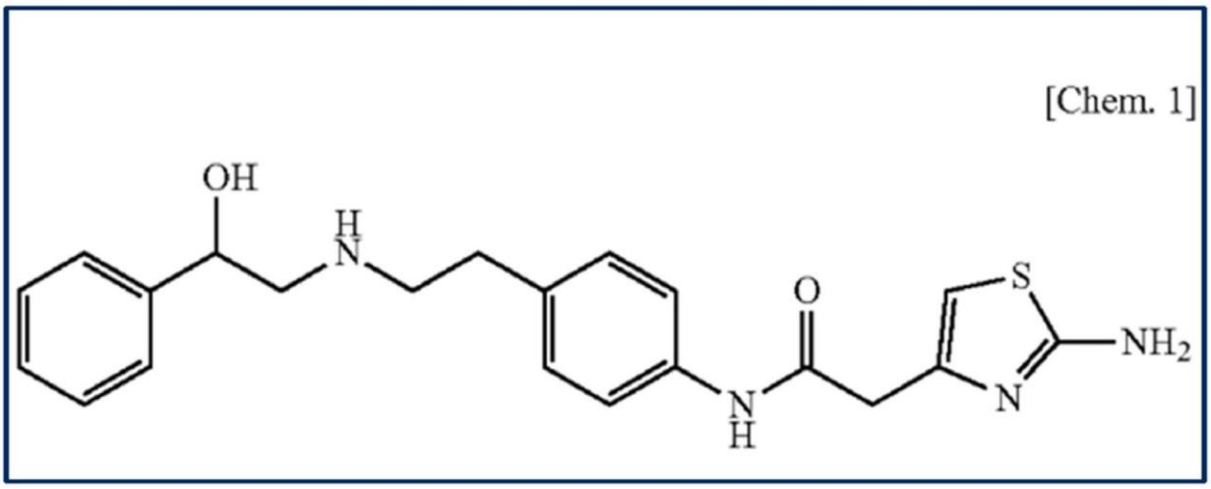
There is evidence of unexpected results and industry praise. First, the inventors of the Asserted Patents unexpectedly discovered that the claimed formulations permitted the reduction of the unknown food effect observed with the immediate release form. D.I. 356 at 146. That the claimed inventions could provide an effective overactive bladder treatment while solving IR mirabegron's food effect was an unexpected result. D.I. 356 at 147. And second, Myrbetriq® launched to the widespread acclaim of the medical and scientific communities. After Myrbetriq® was approved in 2012, the product received several awards for its breakthrough. D.I. 356 at 39. In 2014, Myrbetriq® received the Pharmaceutical Society of Japan Award for Drug Research and Development (PTX-309.1); in 2014, mirabegron's application to an "[o]veractive [b]ladder [t]herapeutic [a]gent" earned Astellas the Tokyo Excellence Award (PTX-306.1); and in 2016, Myrbetriq® received the Okochi Memorial Technology Award (PTX-308.1).

iv. Written Description

Ascent asserts that the '451 and '189 patents are invalid for lack of written description because they do not disclose to a POSA that the inventors were in possession of an invention relating to the mirabegron free base as opposed to its dihydrochloride salt. *See* D.I. 355 at 183–84. Ascent alleges that the '451 and '189 patents state that their examples

were conducted with Compound A: “In the following Examples, unless otherwise noted, a compound produced according to Example 41 of WO 99/20607 was used as compound A.” JTX-2, 34:24–26. The same language appears in the ’189 patent which shares a common specification with the ’451 patent. The inventor Takahashi reviewed the passage in which the method of manufacturing Example 41 is provided in the WO 99/20607, and he testified that it referred to a dihydrochloride salt, not an anilide. D.I. 354 at 255.

The ’451 and ’189 Patent specifications explicitly state that “(R)-2-(2-aminothiazol-4-yl)-4’-[2-[(2-hydroxy-2-phenylethyl)amino]ethyl]acetic acid anilide” (i.e., the mirabegron free base) is “hereinafter sometimes referred to as compound A” and is “represented by the following structural formula:”



JTX-2.19; JTX-4.22–23.

The chemical formula shown above for compound A is the chemical formula for mirabegron free base. *See* D.I. 354 at 51; D.I. 355 at 255. Compound A in Comparative Example 1 is thus mirabegron free base and not a dihydrochloride salt.

D. Estoppel

The FDA maintains a compendium titled "Approved Drug Products with Therapeutic Equivalence" (colloquially known as the "Orange Book") that contains patent and exclusivity information for branded products. D.I. 356 at 10. Astellas submitted a Form 3542 to list the '503 Patent for Myrbetriq® in the Orange Book on July 30, 2012. DTX-71.3; D.I. 356 at 17. The '503 Patent was then listed in the Orange Book for Myrbetriq® thereafter. *See* DTX-85.4. Astellas's Form 3542 submissions for Myrbetriq® and its Orange Book listings for Myrbetriq® came years after the priority dates of the Asserted Patents. D.I. 355 at 196; D.I. 356 at 15; D.I. 356 at 82.

III. CONCLUSIONS OF LAW

A. Legal Standards & Discussion

i. Infringement

Astellas has alleged infringement of the '780 Patent, the '451 Patent, the '409 Patent, and the '189 Patent against Ascent. D.I. 332 ¶ 4; D.I. 1; C.A. No. 24-1084, D.I. 1.

Infringement is a fact question. *Sunovion Pharmaceuticals, Inc.*, 731 F.3d at 1275. First, the claims must be appropriately construed, and, second, the accused product must be compared to the properly-construed claims. *PSC Computer Prods., Inc. v. Foxconn Int'l, Inc.*, 355 F.3d 1353, 1360 (Fed. Cir. 2004). Plaintiffs have the burden of proving infringement by a preponderance of the evidence, *i.e.*, that it is "more likely than not" that the accused infringing product meets the limitations of the claims as construed. *Warner-Lambert Co. v. Teva Pharms. USA, Inc.*, 418 F.3d 1326, 1341 (Fed. Cir. 2005); *Creative Compounds, LLC v. Starmark Lab'ys*, 651 F.3d 1303, 1314–15 (Fed. Cir. 2011).

The filing of an ANDA is a technical act of infringement. 35 U.S.C. § 271(e)(2). If "a product that an ANDA applicant is asking the FDA to approve for sale falls within the scope

of an issued patent, a judgment of infringement must necessarily ensue." *Sunovion Pharmaceuticals, Inc.*, 731 F.3d at 1278–79. What a generic applicant "has asked the FDA to approve as a regulatory matter is the subject matter that determines whether infringement will occur." *Sunovion Pharmaceuticals, Inc.*, 731 F.3d at 1278. Moreover, an ANDA applicant should not be permitted to liken their product to the claimed composition to support their bid for FDA approval, yet avoid the consequences of such a comparison for purposes of infringement. *Intendis GMBH v. Glenmark Pharms. Inc., USA*, 822 F.3d 1355, 1366–67 (Fed. Cir. 2016).

"The scope of a patent is not limited to its literal terms but instead embraces all equivalents to the claims described." *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 731 (2002). Equivalency under the doctrine of equivalents is determined by "evidence that the accused device contains an element that is not 'substantially different' from any claim element that is literally lacking, or that the claimed limitation and the accused component perform substantially the same function in substantially the same way to achieve substantially the same result." *Kraft Foods, Inc. v. Int'l Trading Co.*, 203 F.3d 1362, 1371 (Fed. Cir. 2000).

As the Court ruled on the motion for directed verdict at the conclusion of evidence, Astellas has proven, by a preponderance of the evidence, that the submission of Ascent's ANDA infringes claims 9, 13 and 20 of U.S. Patent No. 10,842,780; claims 5 and 6 of U.S. Patent No. 11,707,451; claim 5 of U.S. Patent No. 12,059,409; and claims 4 and 19 of U.S. Patent No. 12,097,189. Additionally, based on the Court's findings of fact, Astellas has proven, by a preponderance of the evidence, that Ascent's commercial manufacture, use, sale, offer to sell, and/or importation of Ascent's ANDA Products prior to the expiration of the Asserted Patents would infringe claims 9, 13, and 20 of U.S. Patent No. 10,842,780; claims

5 and 6 of U.S. Patent No. 11,707,451; claim 5 of U.S. Patent No. 12,059,409, and claims 4 and 19 of U.S. Patent No. 12,097,189, including by inducing and contributing to infringement of these claims. In essence, the generic products mirror the composition and clinical efficacy of the patented product as required during FDA approval. Astellas's Myrbetriq medication substantially conforms to the described patented invention listed in all four patents in suit.

ii. Invalidity

A patent is presumed valid. 35 U.S.C. § 282. "The burden of establishing invalidity of a patent or any claim thereof shall rest on the party asserting such invalidity." *Microsoft Corp. v. I4I Ltd. P'ship*, 564 U.S. 91, 95 (2011) (quoting 35 U.S.C. § 282). An invalidity defense must be proved by clear and convincing evidence. *Id.* Therefore, Ascent bears the burden of proof on validity.

1. Section 101 – Patent-Eligible Subject Matter

To determine whether a patent claims ineligible subject matter under § 101, the United States Supreme Court has articulated a two-step test—the *Alice/Mayo* test. At step 1, a patent challenger must demonstrate that the claims at issue are "directed to" a patent-ineligible concept—*i.e.*, a law of nature, a natural phenomenon, or an abstract idea. *Alice Corp. Pty. v. CLS Bank Int'l*, 573 U.S. 208, 217 (2014). Laws of nature, natural phenomena, and abstract ideas are not patentable. *Mayo Collaborative Servs. v. Prometheus Lab'ys, Inc.*, 566 U.S. 66, 70 (2012). Phenomena of nature, though just discovered, are not patentable, as they are among the basic tools of scientific and technological work. *Id.* If the challenged claims are not directed to ineligible subject matter, the eligibility inquiry ends there. *See Vanda Pharmaceuticals Inc.*, 887 F.3d at 1134. Otherwise, at step 2, a patent challenger must show that those claims contain no additional elements that "'transform the

nature of the claim' into an inventive application" of the patent-ineligible concept. *Alice Corp. Pty.*, 573 U.S. at 223.

The Court finds that Ascent has not demonstrated by clear and convincing evidence that any Asserted Claim is invalid as claiming patent-ineligible subject matter under 35 U.S.C. § 101. First, Claims 9 and 13 of the '780 Patent, and claim 5 of the '409 Patent are directed to nonnatural compositions created using a nonnatural drug and nonnatural excipients. They are therefore not directed towards ineligible subject matter and are not invalid under § 101 at *Alice/Mayo* step 1. Second, Claim 20 of the '780 Patent, claims 5 and 6 of the '451 Patent, and claims 4 and 19 of the '189 Patent are directed to a "specific method of treatment for specific patients using a specific compound at specific doses to achieve a specific outcome," and are therefore not directed towards ineligible subject matter and are not invalid under § 101 at *Alice/Mayo* step 1. *See Vanda Pharmaceuticals Inc.*, 887 F.3d at 1136. Because the Asserted Patents are not directed to patent-ineligible subject matter, the Court does not need to reach step 2 of the *Alice/Mayo* test.

2. Section 102 – Anticipation

"Anticipation must be proven by clear and convincing evidence." *Jiaxing Super Lighting Elec. Appliance, Co. v. CH Lighting Tech. Co., Ltd*, 146 F.4th 1098, 1109 (Fed. Cir. 2025). "Anticipation requires that a single prior art reference disclose each and every limitation of the claimed invention, either expressly or inherently." *SRI Int'l, Inc. v. Cisco Sys., Inc.*, 930 F.3d 1295, 1306 (Fed. Cir. 2019). Such disclosures must appear "within the four corners of the document" and be "arranged or combined in the same way as recited in the claim." *Net MoneyIN, Inc. v. VeriSign, Inc.*, 545 F.3d 1359, 1371 (Fed. Cir. 2008). Where the allegedly anticipatory reference does not expressly disclose each and every limitation, "[i]nherent anticipation requires that the missing descriptive material is 'necessarily present,'

not merely probably or possibly present, in the prior art." *Trintec Indus., Inc. v. Top-U.S.A. Corp.*, 295 F.3d 1292, 1295 (Fed. Cir. 2002). "Anticipation does not permit an additional reference to supply a missing claim limitation." *Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1335 (Fed. Cir. 2002).

The Court finds that Ascent has failed to demonstrate by clear and convincing evidence that any Asserted Claim is invalid as anticipated under 35 U.S.C. § 102. The '503 Patent was considered by the Examiner during the prosecution of each Asserted Patent. The '503 Patent does not expressly disclose each and every limitation of the Asserted Claims, including (1) mirabegron, as recited in every Asserted Claim; (2) a 10–200 mg of mirabegron, as required by the asserted claims of the '780 and '409 Patents; or a 25 mg dose, as required by claim 5 of the '451 Patent and claim 6 of the '189 Patent; or a 50 mg dose of mirabegron, as required by claim 6 of the '451 Patent and Claim 19 of the '189 Patent; (3) a "method of treating overactive bladder," as required by the asserted claims of the '451 and '189 Patents; or (4) a "reduced food effect" compared to an immediate-release mirabegron formulation, as required by the asserted claims of the '451 and '189 Patents. Therefore, the '503 Patent does not disclose each and every limitation of the Asserted Claims.

Additionally, Astellas's July 30, 2012, submission to list the '503 Patent in the Orange Book for Myrbetriq® is not prior art because it post-dates the priority dates of all Asserted Patents. *See* 35 U.S.C. § 102. Therefore, Astellas's Orange Book submission has no bearing on the validity of the Asserted Patents. And the declaration submitted to the Patent Office by inventor Yuuki Takaishi dated February 10, 2016, is not prior art, as it was submitted more than six years after the most recent priority date in this case, and does not change the

text of the ’503 Patent. Therefore, the Takaishi Declaration has no bearing on the validity of the Asserted Patents.

3. Section 103 – Obviousness

A patent is only invalid for obviousness “if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.” 35 U.S.C. § 103. Obviousness is a question of law based on underlying fact findings on: (1) the scope and content of the prior art; (2) the differences between the claims and the prior art; (3) the level of ordinary skill in the art; and (4) objective indicia of non-obviousness. *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 17–18 (1966). “[O]bjective indicia ‘may often be the most probative and cogent evidence’ of nonobviousness.” *Liqwd, Inc. v. L'Oreal USA, Inc.*, 941 F.3d 1133 (Fed. Cir. 2019) (quoting *Advanced Display Sys., Inc. v. Kent State Univ.*, 212 F.3d 1272, 1285 (Fed. Cir. 2000)). Objective indicia are essential safe guards that protect against hindsight bias. *Id.* The objective indicia analysis is, therefore, a fundamental part of the overall § 103 obviousness inquiry. *Id.* Courts must consider all evidence of obviousness and non-obviousness before reaching a determination. *In re Cyclobenzaprine Hydrochloride Extended-Release Capsule Pat. Litig.*, 676 F.3d 1063, 1082 (Fed. Cir. 2012). The burden of showing obviousness is “especially difficult” when “the infringer attempts to rely on prior art that was before the patent examiner during prosecution.” *Glaxo Grp. Ltd. v. Apotex, Inc.*, 376 F.3d 1339, 1348 (Fed. Cir. 2004).

A patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art. *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398 (2007). A party seeking to invalidate a patent on

obviousness grounds must demonstrate that "a skilled artisan would have been motivated to combine the teachings of the prior art references to achieve the claimed invention, and that the skilled artisan would have had a reasonable expectation of success in doing so." *Orexo AB v. Actavis Elizabeth LLC*, 903 F.3d 1265, 1271 (Fed. Cir. 2018). It is important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does—a reason for combining disparate prior art references is a critical component of an obviousness analysis; "this analysis should be made explicit." *KSR Intern. Co.*, 550 U.S. at 418 (noting that this is so because inventions in most, if not all, instances rely upon building blocks long since uncovered, and claimed discoveries almost of necessity will be combinations of what, in some sense, is already known).

Extensive experimentation and failure is evidence of a lack of reasonable expectation of success. *Endo Pharms. Inc. v. Actavis LLC*, 922 F.3d 1365, 1373 (Fed. Cir. 2019) (finding that no reasonable expectation of success "is further supported by the fact that the inventors . . . engaged in extensive experimentation, involving much failure, to ultimately produce . . . the Asserted Claims"). Charting a path to the claimed compound by hindsight is not enough to prove obviousness. *Sanofi-Aventis U.S., LLC v. Dr. Reddy's Lab'ys, Inc.*, 933 F.3d 1367, 1375 (Fed. Cir. 2019). "Any compound may look obvious once someone has made it and found it to be useful, but working backwards from that compound, with the benefit of hindsight, once one is aware of it does not render it obvious." *Id.* (quoting *Amerigen Pharms. Ltd. v. UCB Pharma GmBH*, 913 F.3d 1076, 1089 (Fed. Cir. 2019)). "The inventor's own path itself never leads to a conclusion of obviousness; that is hindsight. What matters is the path that the person of ordinary skill in the art would have followed, as evidenced by the

pertinent prior art." *Otsuka Pharm. Co. v. Sandoz, Inc.*, 678 F.3d 1280, 1296 (Fed. Cir. 2012). Here, only the inventor knew of the food effect, and then proceeded to solve it.

"[O]bjective indicia 'may often be the most probative and cogent evidence' of nonobviousness. Objective indicia are essential safe guards that protect against hindsight bias. The objective indicia analysis is, therefore, a fundamental part of the overall § 103 obviousness inquiry.'" *Liqwd, Inc.*, 941 F.3d at 1136–37 (internal citation omitted). Objective indicia include evidence of unexpected results. "[T]hat which would have been surprising to a person of ordinary skill in a particular art would not have been obvious." *In re Soni*, 54 F.3d 746, 750 (Fed. Cir. 1995). Objective indicia also include evidence of industry praise. "Industry participants . . . are not likely to praise an obvious advance over the known art. Thus, if there is evidence of industry praise of the claimed invention in the record, it weighs in favor of the non-obviousness of the claimed invention." *Apple Inc. v. Samsung Elecs. Co.*, 839 F.3d 1034, 1053–54 (Fed. Cir. 2016) (en banc).

The Court finds that Ascent's obviousness analysis fails to meet its burden of demonstrating obviousness of any Asserted Claim by clear and convincing evidence as a matter of law. First, Astellas's submission of the '503 Patent for listing in the Orange Book for Myrbetriq® is not prior art to the Asserted Patents, and thus it is not relevant to the non-obviousness of the Asserted Claims. Moreover, reliance on the Orange Book listing by Ascent and Dr. Dash to select the '503 Patent as prior art is based on hindsight. Second, Takasu '540, the '503 Patent, Sako '602, and Sako '603, individually and in combination, do not disclose every limitation of the Asserted Claims. Therefore, the claimed inventions would not have been obvious to a POSA as of the Asserted Patents' priority dates in view of any of Ascent's reference combinations, and Ascent has failed to make a *prima facie* case of obviousness. And third, the objective indicia of unexpected results and industry praise

support the non-obviousness of the Asserted Claims. Therefore, Ascent has failed to demonstrate by clear and convincing evidence that any Asserted Claim is invalid as obvious under 35 U.S.C. § 103.

4. Section 112 – Written Description

The test for written description "is whether the disclosure conveys to those skilled in the art that the inventor had possession of the claimed subject matter as of the filing date" and "requires an 'objective inquiry into the four corners of the specification from the perspective of a person of ordinary skill in the art.'" *Streck, Inc. v. Rsch. & Diagnostic Sys., Inc.*, 665 F.3d 1269, 1285 (Fed. Cir. 2012).

The Court finds that the common specification of the '451 and '189 Patents adequately conveys to a POSA that the inventors were in possession of the patents' claimed inventions using the free-base form of mirabegron. The common specification demonstrates the inventors' possession of "Compound A"—the free-base form of mirabegron. The Common Specification states that "(R)-2-(2-aminothiazol-4-yl)-4′-[2-[(2-hydroxy-2-phenylethyl)amino]ethyl]acetic acid anilide (hereinafter sometimes referred to as compound A) is represented by the following structural formula." JTX-2.19 (showing structural formula); JTX-4.22 (same). Therefore, Ascent has failed to prove by clear and convincing evidence that any claim of the '451 and '189 Patents lacks adequate written description.

iii. Estoppel

Ascent argues that Astellas should be bound by its sworn statement to the FDA about the '503 Patent. Astellas argues that it stands by the statements it actually made to the FDA.

"To warrant judicial estoppel, three elements must exist: '(1) the party to be estopped is asserting a position that is irreconcilably inconsistent with one [it] asserted in a prior proceeding; (2) the party changed [its] position in bad faith, i.e., in a culpable manner

threatening the court's authority or integrity; and (3) the use of judicial estoppel is tailored to address the affront to the court's authority or integrity.'" *In re ESML Holdings Inc*, 135 F.4th 80, 92 (3d Cir. 2025).

Here, none of these elements are met. The FDA submission form Astellas filed does not ask the NDA applicant whether the listed patent enables or discloses how to make and use the entirety of Myrbetriq®, nor does any question on the form "require Astellas to assess the validity of the '503 patent prior to submitting the form." D.I. 356 at 21. Moreover, the Orange Book filing is not binding between agencies (FDA and Patent Office). The Orange Book gives notice that Mirabegron and the '503 Patent both apply to Myrbetriq—as does the '780 Patent. The Orange Book theory is not germane to the issues in this case.

IV. CONCLUSION

Accordingly, the Court rejects defendant Ascent's invalidity defense and finds in favor of plaintiff Astellas on its claim of infringement.

A judgment in conformity with these Findings of Fact and Conclusions of Law will issue on this date.

SO ORDERED this 6th day of March, 2026.

BY THE COURT:

s/ Joseph F. Bataillon
Senior United States District Judge

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

ASTELLAS PHARMA INC., ASTELLAS IRELAND CO., LTD., and ASTELLAS PHARMA GLOBAL DEVELOPMENT, INC., Plaintiffs, vs. ASCENT PHARMACEUTICALS, INC., MSN PHARMACEUTICALS INC., and MSN LABORATORIES PRIVATE LIMITED, Defendants.	**1:23CV486** **ORDER**

This matter is before the Court regarding the letter Plaintiffs submitted to the Court on February 26, 2026. D.I. 385. Plaintiffs submitted this letter regarding Remedies for Infringement following the February 18, 2026, emergency status conference held before the Court. *Id.* Plaintiffs' letter seeks to provide clarification regarding the issue of an injunction, should the Court enter a judgment of infringement against Ascent. *Id.* Plaintiffs argue that should the Court conclude that Ascent infringes a valid claim, then 35 U.S.C. § 271(e)(4)(A) mandates entry of an order resetting the effective date of final FDA approval of Ascent's generic Myrbetriq® products. *Id.*

The Hatch-Waxman Act, 35 U.S.C. § 271(e)(2), makes it an act of infringement to submit an Abbreviated New Drug Application ("ANDA") to the FDA for a drug claimed in a patent or use of which is claimed in a patent. *See* 35 U.S.C. § 271(e)(2)(A). Section 271(e)(4) prescribes the remedies for such infringement:

> (4) For an act of infringement described in paragraph (2)—
>
> > (A) the court shall order the effective date of any approval of the drug or veterinary biological product involved in the infringement to be a date which is not earlier than the date of the expiration of the patent which has been infringed,

. . .

> The remedies prescribed by subparagraphs (A), (B), (C), and (D) are the only remedies which may be granted by a court for an act of infringement described in paragraph (2), except that a court may award attorney fees under section 285.

35 U.S.C. § 271(e)(4). The Federal Circuit has emphasized the mandatory nature of this framework: "upon a finding of patent infringement under § 271(e)(2), the district court must order remedies in accordance with § 271(e)(4)." *Vanda Pharms. Inc. v. W.-Ward Pharms. Int'l Ltd.*, 887 F.3d 1117, 1138 (Fed. Cir. 2018).

In this case, the Court has found that Ascent infringes a valid claim. *See* the Court's March 6, 2026, Memorandum & Order. Therefore, pursuant to 35 U.S.C. § 271(e)(4)(A), the effective date of any final approval by the FDA of Ascent's ANDA No. 218172 shall be a date not earlier than September 28, 2029, the date of expiration of the Asserted Patents, together with any period of pediatric exclusivity that has been awarded to Astellas under 21 U.S.C. § 355a, extending through March 28, 2030.

Further, the Court denies Plaintiffs' Motion for Temporary Restraining Order (D.I. 377) because they have not shown irreparable harm. In fact, the measure of damages effectively was disclosed during the hearing for the TRO. Additionally, the Court will not rule on the Plaintiffs' Motion for Preliminary Injunction (D.I. 388) at this time because it is anticipatory. Defendants have not yet responded to the motion or the Court's trial findings, therefore it is not ripe.

Dated this 6th day of March, 2026.

BY THE COURT:

s/ Joseph F. Bataillon
Senior United States District Judge