

IN THE UNITED STATES DISTRICT COURT FOR THE
EASTERN DISTRICT OF PENNSYLVANIA

ASTELLAS PHARMA INC., ASTELLAS)
IRELAND CO., LTD. and ASTELLAS)
PHARMA GLOBAL DEVELOPMENT,)
INC.,) Case No. _____
)
Plaintiffs,)
)
v.)
)
QILU PHARMA, INC. and QILU)
PHARMACEUTICAL CO., LTD.,)
)
Defendants.)

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiffs Astellas Pharma Inc., Astellas Ireland Co., Ltd., and Astellas Pharma Global Development, Inc. (collectively, "Astellas" or "Plaintiffs"), by their undersigned attorneys, hereby allege as follows:

THE PARTIES

A. Astellas Pharma Inc., Astellas Ireland Co., Ltd. and Astellas Pharma Global Development, Inc.

1. 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.

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.

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.

B. Qilu Pharma, Inc. and Qilu Pharmaceutical Co., Ltd. (collectively, “Defendants”)

4. On information and belief, Defendant Qilu Pharma, Inc. is a corporation organized and existing under the laws of the State of Pennsylvania, having a principal place of business at 101 Lindenwood Drive, Suite 225, Malvern, PA 19355.

5. On information and belief, Defendant Qilu Pharmaceutical Co., Ltd. is a Chinese company, having a principal place of business at No. 243, Gong Ye Bei Road, Jinan, 250101, China.

6. On information and belief, Qilu Pharmaceutical Co., Ltd. and Qilu Pharma Inc. are in the business of, *inter alia*, developing, preparing, manufacturing, selling, marketing, and distributing generic pharmaceutical products throughout the United States, including in this judicial district.

7. By a letter dated November 28, 2022 (“Qilu’s Notice Letter”), Defendants notified Plaintiffs that Defendants had submitted to the United States Food and Drug Administration (“FDA”) Abbreviated New Drug Application (“ANDA”) No. 217989 for mirabegron extended-release tablets, 25 mg and 50 mg (“Qilu ANDA”), a drug product that is a generic version of Myrbetriq® extended-release tablets, in the 25 and 50 mg strengths (“Qilu’s ANDA Product”). On information and belief, the purpose of Defendants’ submission of the Qilu ANDA was to obtain approval under the Federal Food, Drug, and Cosmetic Act (“FDCA”) to

engage in the commercial manufacture, use, offer for sale, and/or sale of Qilu's ANDA Product Prior to March 28, 2030.

8. In Qilu's Notice Letter, Defendants notified Plaintiffs that as part of the Qilu ANDA Defendants had filed a certification of the type described in Section 505(j)(2)(A)(vii)(IV) of the FDCA, 21 U.S.C. § 355(j)(2)(A)(vii)(IV), with respect to some of the then-listed patents in the FDA's Approved Drug Products with Therapeutic Equivalence Evaluation ("Orange Book"), asserting that they are invalid, unenforceable, and/or will not be infringed by the commercial manufacture, use, and sale of Qilu's ANDA Product.

9. On information and belief, and consistent with their past practices, following any FDA approval of ANDA No. 217989, Qilu Pharma Inc. will work as the U.S. agent of Qilu Pharmaceutical Co., Ltd. to make, use, offer to sell, and/or sell the generic drug products that are the subject of ANDA No. 217989 throughout the United States, and/or import such generic drug products into the United States, including in this judicial district.

NATURE OF ACTION

10. This is an action for patent infringement of United States Patent No. 10,842,780 ("the '780 Patent"), arising under the United States patent laws, Title 35, United States Code. This action relates to the ANDA submitted by Defendants under Section 505(j) of the FDCA, 21 U.S.C. § 355(j), seeking FDA approval to market generic pharmaceutical products.

JURISDICTION AND VENUE

11. This Court has jurisdiction over the subject matter of this action under 28 U.S.C. §§ 1331, 1338(a).

12. This Court has personal jurisdiction over Qilu Pharma Inc. because, *inter alia*, Qilu Pharma Inc. is incorporated in Pennsylvania.

13. The Court also has jurisdiction over Qilu Pharmaceutical Co. Ltd. because (a) Astellas's claims arise under federal law; (b) as a foreign defendant, Qilu Pharmaceutical Co., Ltd. is not subject to jurisdiction in any state's courts of general jurisdiction; and (c) Qilu Pharmaceutical Co., Ltd. has sufficient contacts within the United States as a whole, including but not limited to preparing and submitting an ANDA to the FDA and/or manufacturing and/or selling pharmaceutical products distributed throughout the United States, personally or through its agent Qilu Pharma Inc., such that this Court's exercise of jurisdiction over Qilu Pharmaceutical Co., Ltd. satisfies due process.

14. This Court has personal jurisdiction over Defendants because, *inter alia*, Defendants have committed, or aided, abetted, contributed to, or participated in the commission of, tortious acts of patent infringement in filing ANDA 217989 that has led to foreseeable harm and injury to Plaintiffs, and will imminently commit, or aid, abet, contribute to, or participate in the commission of, a tortious act of patent infringement by selling its ANDA Product throughout the United States and in this judicial district, which will lead to foreseeable harm and injury to Plaintiffs.

15. The Court also has personal jurisdiction over Defendants because, *inter alia*, this action arises from actions of Defendants directed toward Pennsylvania, and because Defendants have purposefully availed themselves of the rights and benefits of Pennsylvania law by engaging in systematic and continuous contacts with Pennsylvania. Upon information and belief, Defendants regularly and continuously transact business within Pennsylvania, including by selling pharmaceutical products in Pennsylvania, either on their own or through their affiliates. Upon information and belief, Defendants derive substantial revenue from the sale of those products in Pennsylvania and have availed themselves of the privilege of conducting business in

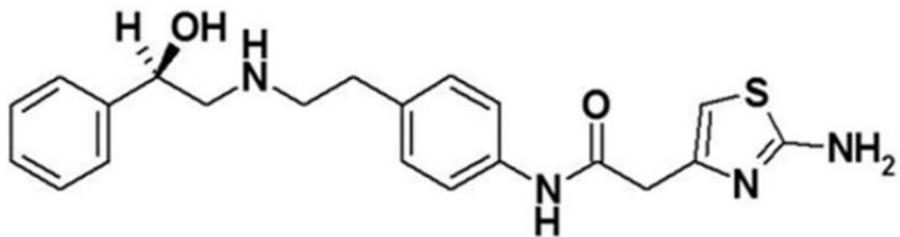
Pennsylvania.

16. Venue is proper in this Court pursuant to 28 U.S.C. §§ 1391 and 1400(b).

MYRBETRIQ® TABLETS

17. APGD holds approved New Drug Application (“NDA”) No. 202611 for Myrbetriq® extended-release tablets, 25 mg and 50 mg, which contain the active ingredient, mirabegron. The FDA approved NDA No. 202611 on June 28, 2012 for both the 25 mg and 50 mg extended-release Myrbetriq® tablets.

18. Mirabegron has been referred to chemically as, *inter alia*, (R)-2-(2-aminothiazol-4-yl)-4’-[2-(2-hydroxy-2-phenylethyl)amino]ethyl]acetic acid anilide, (R)-2-(2-aminothiazol-4-yl)-4’-[2-[(2-hydroxy-2-phenylethyl)amino]ethyl]acetanilide, and 2-(2-aminothiazol-4-yl)-N-[(2-{[(2R)-2-hydroxy-2-phenylethyl]amino}ethyl)phenyl]acetamide. Mirabegron can be depicted as, *inter alia*, the following formula:



19. Myrbetriq® extended-release tablets, containing 25 mg or 50 mg of mirabegron (“Myrbetriq® Tablets”), are indicated for the treatment of overactive bladder (“OAB”) with symptoms of urge urinary incontinence, urgency, and urinary frequency.

20. Myrbetriq® Tablets comprise a sustained release hydrogel-forming formulation containing, *inter alia*, polyethylene oxide and polyethylene glycol as inactive ingredients within the tablet formulation, which function as a means for forming a hydrogel and a means for ensuring penetration of water into the tablets.

21. For quality control purposes in the U.S. market, Myrbetriq® Tablets are subjected

to dissolution testing using the United States Pharmacopeia (“USP”) Apparatus I. A dissolution test evaluates the rate and extent that a compound forms a solution under carefully controlled conditions. Within the context of regulatory approval, the USP dissolution test helps safeguard against the release of drug products that do not perform acceptably. USP Apparatus I (basket) and II (paddle) provide a platform to evaluate the *in vitro* performance of dosage forms using standardized conditions. These two apparatus, and associated procedures, have become widely used and accepted.

22. When measured in accordance with the United States Pharmacopeia (“USP”) dissolution apparatus II, using 900 mL of USP buffer and having a pH of 6.8 at a paddle rotation speed of 200 rpm (“USP II Method”), the Myrbetriq® Tablets release 39% or less of mirabegron after 1.5 hours, and at least 75% mirabegron after 7 hours.

23. The ’780 Patent and United States Patent Nos. 7,342,117 (“the ’117 Patent”), 7,982,049 (“the ’049 Patent”), 8,835,474 (“the ’474 Patent”) and RE44,872 (“the ’872 Patent”) are listed in the Orange Book in connection with NDA 202611 as covering Myrbetriq®.

THE PATENT-IN-SUIT

24. The United States Patent & Trademark Office (“PTO”) duly and legally issued the ’780 Patent, entitled “Pharmaceutical Composition for Modified Release,” on November 24, 2020. A true and correct copy of the ’780 Patent is attached as **Exhibit A**.

25. API is the record owner and assignee of the ’780 Patent.

26. The ’780 Patent will expire no earlier than September 28, 2029.

27. The ’780 Patent’s pediatric exclusivity extends to March 28, 2030.

28. AICL is the exclusive licensee of the ’780 Patent 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.

29. APGD has contracted with AICL to, *inter alia*, clinically develop mirabegron, prepare and submit NDA No. 202611 for marketing approval of Myrbetriq® Tablets in the United States.

30. AICL has contracted with Astellas Pharma US, Inc., a subsidiary of API to, *inter alia*, market and sell Myrbetriq® Tablets, in the United States on its behalf.

31. Myrbetriq® Tablets are covered by one or more claims of the '780 Patent.

MIRABEGRON ANDA FILERS

32. In June 2013, FDA issued a notice in the Federal Register (78 Fed. Reg. 37230 at 31 (June 20, 2013)) regarding bioequivalence guidance to be published on its website for mirabegron ANDAs. On its website, FDA lists the following dissolution requirements for mirabegron ANDA filers in order to establish bioequivalence with Myrbetriq® Tablets (“Mirabegron Bioequivalence Guidance”):

Drug Name	Dosage Form	USP Apparatus	Speed (RPMs)	Medium	Volume (mL)	Recommended Sampling Times (minutes)	Date Updated
Mirabegron	Tablet (Extended Release)	I (Basket)	100	Phosphate Buffer, pH 6.8	900	1, 3, 5, 7, 8.5, 10 and 12 hours	05/09/2013

33. On information and belief, each mirabegron ANDA filer will be required to meet this dissolution method, or an equivalent dissolution method, to meet its bioequivalence requirements for its proposed ANDA product using Myrbetriq® Tablets as the reference standard. On information and belief, a proposed mirabegron ANDA product will have equivalent dissolution properties to Myrbetriq® Tablets as measured by USP Apparatus I and II.

CLAIMS FOR RELIEF

**COUNT I: INFRINGEMENT OF THE '780 PATENT BY
DEFENDANTS UNDER 35 U.S.C. § 271(e)(2)(A)**

34. Plaintiffs incorporate by reference and reallege paragraphs 1 through 33 above as though fully restated herein.

35. Defendants, by filing ANDA No. 217989, have necessarily represented to the FDA that, upon approval, Qilu's ANDA Product will have the same active ingredient, method of administration, dosage form, and dosage amount as Myrbetriq® Tablets, and will be bioequivalent to Myrbetriq® Tablets.

36. Defendants, via Qilu's Notice Letter, have indicated their intent to engage in the commercial manufacture, use, offer for sale, sale, marketing, distributing, and/or importation of Qilu's ANDA Product prior to the expiration of the '780 Patent.

37. Defendants' submission of ANDA No. 217989 seeking approval to engage in the commercial manufacture, use, offer to sell, or sale of Qilu's ANDA Product, prior to the expiration of the '780 Patent, constitutes infringement of one or more of the claims of the '780 Patent under 35 U.S.C. § 271(e)(2)(A).

38. On information and belief, Defendants intend to engage in the commercial manufacture, use, offer for sale, sale, marketing, distributing, and/or importation of Qilu's ANDA Product upon final approval of ANDA No. 217989 and prior to the expiration of the pediatric exclusivity associated with the '780 Patent, but no earlier than the pediatric exclusivity associated with the expiration of the '117, '049, '474 and '872 Patents.

39. Qilu's ANDA Product contains either 25 mg or 50 mg of mirabegron in extended-release tablets. Qilu's ANDA Product will also be bioequivalent to Myrbetriq® Tablets.

40. On information and belief, and as required by the Mirabegron Bioequivalence

Guidance, Defendants use the dissolution method (or its equivalent) to establish Qilu's ANDA Product is bioequivalent to Myrbetriq® Tablets. On information and belief, Qilu's ANDA Product will have equivalent dissolution properties, as measured by USP Apparatus I and II, to Myrbetriq® Tablets, which use a hydrogel formulation. On information and belief, because of the dissolution requirements contained within the Mirabegron Bioequivalence Guidance, including the use of Myrbetriq® Tablets as the reference standard, Qilu's ANDA Product uses a hydrogel formulation, the same as or equivalent to the Myrbetriq® Tablets formulation, that is covered by one or more claims of the '780 Patent.

41. The commercial manufacture, use, offer for sale, sale, marketing, distributing, and/or importation of Qilu's ANDA Product would infringe one or more claims of the '780 Patent, or their equivalents, under 35 U.S.C. § 271(a). Qilu's Notice Letter does not indicate that Qilu's ANDA Product does not infringe the claims of the '780 Patent.

42. Unless Defendants are enjoined by the Court, Plaintiffs will be substantially and irreparably harmed by Defendants' infringement of the '780 Patent. Plaintiffs do not have an adequate remedy at law.

**COUNT II: DECLARATORY JUDGMENT OF CONTRIBUTORY INFRINGEMENT
OF THE '780 PATENT BY DEFENDANTS UNDER 35 U.S.C. § 271(c)**

43. Plaintiffs incorporate by reference and reallege paragraphs 1 through 42 above as though fully restated herein.

44. On information and belief, if ANDA No. 217989 is approved by the FDA, Defendants will manufacture Qilu's ANDA Product, and will, without authority, induce or cause others to import Qilu's ANDA Product into the United States, or will offer to sell or sell Qilu's ANDA Product within the United States.

45. Qilu's ANDA Product constitutes a material part of the inventions covered by the claims of the '780 Patent and has no substantial non-infringing uses.

46. On information and belief, Defendants have had, and continue to have, knowledge that there is no substantial non-infringing use for Qilu's ANDA Product.

47. Defendants' actions will constitute contributory infringement of the '780 Patent pursuant to 35 U.S.C. § 271(c).

48. As a result of the foregoing facts, there is a real, substantial, and continuing justiciable controversy between Plaintiffs and Defendants as to the liability of Defendants' infringement of the '780 Patent. Defendants' actions have created in Plaintiffs a reasonable apprehension of irreparable harm and loss resulting from Defendants' threatened imminent actions.

49. Unless Defendants are enjoined by the Court, Plaintiffs will be substantially and irreparably harmed by Defendants' infringement of the '780 Patent. Plaintiffs do not have an adequate remedy at law.

**COUNT III: DECLARATORY JUDGMENT OF INDUCED INFRINGEMENT OF THE
'780 PATENT BY DEFENDANTS UNDER 35 U.S.C. § 271(b)**

50. Plaintiffs incorporate by reference and reallege paragraphs 1 through 49 above as though fully restated herein.

51. On information and belief, if ANDA No. 217989 is approved by the FDA, Defendants will manufacture Qilu's ANDA Product, and will, without authority, induce or cause others to import Qilu's ANDA Product into the United States, offer for sale or sell Qilu's ANDA Product in the United States, or use Qilu's ANDA Product in the United States.

52. Qilu's ANDA Product and the use thereof would directly infringe the '780 Patent under 35 U.S.C. § 271(a).

53. On information and belief, Defendants have had, and continue to have, knowledge of the '780 Patent.

54. On information and belief, Defendants have had, and continue to have, knowledge that Qilu's ANDA Product and the use thereof would directly infringe the '780 Patent.

55. Defendants' inducement of others to import Qilu's ANDA Product into the United States, offer for sale or sell Qilu's ANDA Product in the United States, or use Qilu's ANDA Product in the United States will aid and abet the direct infringement of the '780 Patent.

56. On information and belief, Defendants specifically intend to induce infringement of the '780 Patent.

57. Defendants' actions will constitute inducement of infringement of the '780 Patent pursuant to 35 U.S.C. § 271(b).

58. As a result of the foregoing facts, there is a real, substantial, and continuing justiciable controversy between Plaintiffs and Defendants as to the liability of Defendants' infringement of the '780 Patent. Defendants' actions have created in Plaintiffs a reasonable apprehension of irreparable harm and loss resulting from Defendants' threatened imminent actions.

59. Unless Defendants are enjoined by the Court, Plaintiffs will be substantially and irreparably harmed by Defendants' infringement of the '780 Patent. Plaintiffs do not have an adequate remedy at law.

PRAYER FOR RELIEF

WHEREFORE, Plaintiffs API, AICL, and APGD, pray for a judgment in their favor and against Defendants, and respectfully request the following relief:

A. A judgment that the Defendants' submission and maintenance of ANDA No.

217989 constituted an act of infringement of the '780 Patent;

B. A judgment (or a declaration) that the Defendants' making, using, offering to sell, or selling in the United States or importing into the United States of Qilu's ANDA Product will infringe the '780 Patent;

C. A permanent injunction restraining and enjoining the Defendants, their affiliates, subsidiaries, and each of their officers, agents, attorneys and employees, and those acting in privity or concert with them, from engaging in the commercial manufacture, use, offer for sale, or sale within the United States, or importation into the United States, of Qilu's ANDA Product until the expiration of the '780 Patent, including any extensions and/or periods of exclusivity to which Plaintiffs and/or the '780 Patent are or become entitled;

D. An order pursuant to 35 U.S.C. § 271(e)(4)(A) providing that the effective date of any approval of the Defendants' ANDA shall be a date that is not earlier than the expiration date of the '780 Patent, including any extensions and/or periods of exclusivity to which Plaintiffs and/or the '780 Patent are or become entitled;

E. Damages, including monetary and other relief, to Plaintiffs if the Defendants engage in commercial manufacture, use, offers to sell, sale, or importation into the United States of Qilu's Proposed ANDA Product, prior to the expiration date of the '780 Patent, including any extensions and/or additional periods of exclusivity to which Plaintiffs are or become entitled;

F. A declaration that this case is "exceptional" within the meaning of 35 U.S.C. § 285 and an award of reasonable attorney fees, costs, expenses, and disbursements of this action; and

G. Such other and further relief as the Court may deem just and proper.

Dated: January 11, 2023

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