

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MASSACHUSETTS

RIGSHOSPITALET,

Plaintiff,

v.

SHIRE-NPS PHARMACEUTICALS,
INC.

and

TAKEDA PHARMACEUTICALS
U.S.A., INC.,

Defendants.

Case No. 21cv11602

JURY TRIAL DEMANDED

COMPLAINT

Plaintiff Rigshospitalet, a hospital located in Denmark that is affiliated with the University of Copenhagen, by and through its undersigned counsel, files this Complaint against Shire-NPS Pharmaceuticals, Inc. (“Shire-NPS”) and Takeda Pharmaceuticals U.S.A., Inc. (“Takeda USA”; collectively with Shire-NPS, “Defendants”), and alleges as follows:

NATURE OF THE SUIT

1. Rigshospitalet brings this action to remedy Defendants’ theft of inventions relating to the revolutionary treatment of short bowel syndrome (“SBS”) in patients with colon-incontinuity using GLP-2 receptor agonists. By misappropriating Rigshospitalet’s inventions, Defendants have earned *more than \$2 billion* in revenue on sales of Gattex[®] without paying any royalties to Rigshospitalet — a revenue stream that Rigshospitalet could have re-invested in researching and developing other groundbreaking medical treatments.

2. The revolutionary inventions that Defendants stole were developed by Dr. Per Brøbech Mortensen and Dr. Palle Bekker Jeppesen at Rigshospitalet — a hospital located in

Denmark that is affiliated with the University of Copenhagen. Dr. Mortensen is Chief Physician and Head of the Department of Medicine, Gastroenterology Section at Rigshospitalet.

Dr. Jeppesen is Head of Research in the Department of Medicine, Gastroenterology Section at Rigshospitalet.

3. Drs. Mortensen and Jeppesen invented the treatment of SBS patients with colon-in-continuity using GLP-2 receptor agonists at Rigshospitalet as part of clinical trials involving the treatment of SBS patients with teduglutide, a dipeptidyl peptidase IV resistant GLP-2 receptor agonist (“Teduglutide Study”). The Teduglutide Study was sponsored by Shire-NPS’s then wholly-owned subsidiary NPS Allelix Corporation (“NPS Allelix”).

4. Shire-NPS (by and through NPS Allelix), Rigshospitalet, and Dr. Mortensen struck a clear and unequivocal agreement regarding intellectual property resulting from the Teduglutide Study. They agreed that Rigshospitalet owned any intellectual property (including patents) resulting from the Teduglutide Study provided that Shire-NPS had a one-year option to obtain a worldwide, royalty-bearing, exclusive license to any such patents.

5. As they worked on the Teduglutide Study, Drs. Mortensen and Jeppesen discovered that GLP-2 receptor agonists could be used to effectively treat SBS patients with colon-in-continuity — a discovery that was surprising and contrary to the conventional belief that such patients could not be helped using GLP-2 receptor agonists. Drs. Mortensen and Jeppesen reported their findings in a manuscript that was published in the scientific journal *Gut* in August 2005: *Teduglutide (ALX-0600), a dipeptidyl peptidase IV resistant glucagon-like peptide 2 analogue, improves intestinal function in short bowel syndrome patients* (“GLP-2 SBS Article”).

6. But unbeknownst to Drs. Mortensen and Jeppesen, just before submitting the manuscript to *Gut* journal, Shire-NPS submitted a near-final draft of the GLP-2 SBS Article as Provisional Patent Application No. 60/623,233 (“’233 Application”) to the United States Patent and Trademark Office (“Patent Office”). Shire-NPS did not name Drs. Mortensen and Jeppesen as inventors. Shire-NPS did not tell Drs. Mortensen and Jeppesen or Rigshospitalet, and concealed from them, that Shire-NPS had filed the ’233 Application.

7. Shire-NPS continued to file non-provisional patent applications claiming priority to the ’233 Application (collectively, the “GLP-2 SBS Applications”) and has obtained almost 30 United States and foreign patents claiming priority to that application (collectively, the “GLP-2 SBS Patents”; collectively with the GLP-2 SBS Applications, the “GLP-2 SBS Applications and Patents”). Shire-NPS did not name Drs. Mortensen and Jeppesen as inventors on any of the GLP-2 SBS Applications and they are not therefore named as inventors on any of the issued GLP-2 SBS Patents. Shire-NPS did not tell Drs. Mortensen and Jeppesen or Rigshospitalet, and concealed from them, that Shire-NPS had filed the GLP-2 SBS Applications and obtained the GLP-2 SBS Patents.

8. In fact, pursuant to their agreement with Shire-NPS, Rigshospitalet owns all rights, title, and interests in the GLP-2 SBS Applications and Patents. Moreover, Drs. Mortensen and Jeppesen are inventors of the inventions claimed in the GLP-2 SBS Applications and Patents.

9. Rigshospitalet only recently learned about Defendants’ theft of its inventions and that Defendants have earned billions of dollars on royalty-free sales of Gattex — a parenteral therapeutic containing GLP-2 receptor agonists indicated for use in the treatment of adult and pediatric SBS patients, including patients with colon-in-continuity.

10. Rigshospitalet brings this action to remedy Defendants' theft of Drs. Mortensen and Jeppesen's inventions, wrongful prosecution of the GLP-2 SBS Applications, and misuse of the GLP-2 SBS Patents to protect the royalty-free profits that Defendants have illicitly earned by exploiting Drs. Mortensen and Jeppesen's inventions.

THE PARTIES

11. Plaintiff Rigshospitalet is located at Blegdamsvej 9, 2100 Copenhagen Ø, Denmark. Rigshospitalet is the most specialized hospital in Copenhagen and one of the largest hospitals in Denmark. Rigshospitalet is the owner of all rights, title, and interests in Drs. Mortensen and Jeppesen's inventions described in the '233 Application and all applications and patents claiming priority thereto, including the GLP-2 SBS Applications and Patents.

12. Shire-NPS is a corporation organized and existing under the laws of the state of Delaware, with its principal place of business at 300 Shire Way, Lexington, Massachusetts. Shire-NPS is a wholly owned direct or indirect subsidiary of Takeda USA and is held out as "a Takeda company" on the Gattex website (www.gattex.com). Shire-NPS was formerly known as NPS Pharmaceuticals, Inc. ("NPS Pharmaceuticals"), then-parent of NPS Allelix. In 2008, NPS Allelix sold its intellectual property and substantially all of its other assets to its parent NPS Pharmaceuticals. Shire-NPS, together with Takeda USA, manufactures, distributes, markets, offers for sale, and sells Gattex in the United States.

13. Takeda USA is a corporation organized and existing under the laws of the state of Delaware, with its principal place of business at 95 Hayden Avenue, Lexington, Massachusetts. Takeda USA wholly owns, directly or indirectly, Shire-NPS and holds Shire-NPS out as "a Takeda company" on the Gattex website (www.gattex.com). Takeda USA, together with Shire-NPS, manufactures, distributes, markets, offers for sale, and sells Gattex in the United States.

JURISDICTION AND VENUE

14. This Court has subject matter jurisdiction over Rigshospitalet's claims pursuant to 28 U.S.C. §§ 1331, 1332(a), 1338, 1367, 2201, and 2202. This Court has subject matter jurisdiction over Rigshospitalet's claims for breach of contract, breach of the implied covenant of good faith and fair dealing, unjust enrichment, fraudulent nondisclosure, conversion, and unfair and deceptive trade practices, each having a value exceeding \$75,000, under 28 U.S.C. §§ 1332(a) and 1367. This Court has subject matter jurisdiction over Rigshospitalet's claim to quiet title to the GLP-2 SBS Applications and Patents, which has a value exceeding \$75,000, pursuant to 28 U.S.C. §§ 1332(a), 1367, 2201, and 2202. This Court has subject matter jurisdiction over Rigshospitalet's claim for correction of inventorship pursuant to 28 U.S.C. §§ 1331, 1338(a), 2201, and 2202. This Court has jurisdiction over Rigshospitalet's claims for patent infringement pursuant to 28 U.S.C. §§ 1331 and 1338(a).

15. This Court has personal jurisdiction over Shire-NPS because Shire-NPS maintains its principal place of business in the Commonwealth of Massachusetts; is licensed to do business in Massachusetts; and regularly, systematically, and continuously transacts business within Massachusetts. Shire-NPS has also committed the wrongful acts alleged herein, and benefited from those acts, within Massachusetts. Those wrongful acts include filing and prosecuting the GLP-2 SBS Applications despite the fact that Shire-NPS does not own the inventions claimed therein; deliberately misrepresenting the inventors on the GLP-2 SBS Applications and Patents; wrongfully recording in the Patent Office Shire-NPS's alleged ownership of all rights, title, and interests in the GLP-2 SBS Applications and Patents; wrongfully listing the GLP-2 SBS Patents in the Approved Drug Products with Therapeutic Equivalence Evaluations ("Orange Book") which misrepresented that Shire-NPS owns and/or is

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