IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF NEW YORK

AJINOMOTO CO., INC. and AJINOMOTO HEARTLAND INC.,	)	
	)	**CIVIL ACTION NO._____**
Plaintiffs,	)	
	)	**JURY TRIAL DEMANDED**
v.	)	
	)	
CJ CHEILJEDANG CORP., CJ AMERICA, INC., and **PT CHEILJEDANG INDONESIA**,	)	
	)	
Defendants.	)	

COMPLAINT

Plaintiffs Ajinomoto Co., Inc. and Ajinomoto Heartland, Inc. (collectively, "Ajinomoto" or "Plaintiffs"), bring this Complaint for patent infringement against Defendants CJ CheilJedang Corp., CJ America, Inc., and PT CheilJedang Indonesia (collectively, the "Defendants"), and allege as follows:

NATURE OF THE ACTION

1. Ajinomoto seeks legal and equitable remedies under the patent laws of the United States (35 U.S.C. § 1 *et seq*.) for Defendants' infringement of United States Patent No. 7,666,655 (the "'655 Patent"), entitled "*Escherichia* Bacteria Transformed with the *yddG* Gene to Enhance L-Amino Acid Producing Activity," and United States Patent No. 6,180,373 (the "'373 Patent"), entitled "Microorganisms for the Production of Tryptophan and Process for the Preparation Thereof" (collectively, "the Asserted Patents").

THE PARTIES

2. Ajinomoto Co., Inc. ("Ajinomoto Co.") is a corporation organized under the laws of Japan, with a principal place of business at 15-1, Kyobashi 1-chome, Chuo-ku, Tokyo 104-8315, Japan. Ajinomoto Co. is a world leader in research, development, and production of nutritional and pharmaceutical amino acid products. In 2011, Ajinomoto Co. established Ajinomoto Animal Nutrition Group ("AANG"), a wholly owned subsidiary specializing in the animal nutrition business.

3. Ajinomoto Heartland, Inc. ("Heartland") is a wholly-owned subsidiary of AANG (and hence Ajinomoto Co.), existing under the laws of the state of Illinois with its principal place of business at 8430 W. Bryn Mawr Avenue, Suite 650, Chicago, Illinois. As Ajinomoto Co.'s North American representative, Heartland oversees the manufacture and distribution of certain of Ajinomoto Co.'s amino acid products, and coordinates related research and development activities.

4. On information and belief, CJ CheilJedang Corporation ("CJ Corp.") is a corporation organized under the laws of the Republic of Korea, with its principal place of business in Seoul, Republic of Korea. CJ Corp.'s business activities include the manufacture and worldwide distribution and sale of amino acid products, including but not limited to feed-grade L-tryptophan that is marketed and sold in the United States under CJ Corp.'s "BestAmino™" brand.

5. On information and belief, CJ America, Inc. ("CJ America"), is a New York corporation with a principal place of business in Los Angeles, California. CJ America is CJ Corp.'s United States headquarters and oversees CJ Corp.'s business activities in the United States, which encompass the manufacture, export, import, marketing, distribution, and sale of

amino acid products, including without limitation feed-grade L-tryptophan that is marketed and sold in the United States under CJ Corp.'s "BestAmino™" brand.

6. On information and belief, PT CheilJedang Indonesia ("CJ Indonesia") is an Indonesian entity with a principal place of business in Jakarta, Indonesia. CJ Indonesia, or others on its behalf, manufactures, sells, exports, and imports amino acid products that are imported into the United States for marketing, distribution, and sale, including but not limited to feed-grade L-tryptophan that is marketed and sold in the United States under CJ Corp.'s "BestAmino™" brand.

JURISDICTION AND VENUE

7. This action arises under the patent laws of the United States, 35 U.S.C. § 1 *et seq*. This Court has subject matter jurisdiction pursuant to 28 U.S.C. § 1331 and 28 U.S.C. § 1338(a).

8. Venue is proper in this district pursuant to 28 U.S.C. §§ 1391 & 1400.

9. Upon information and belief, CJ America is subject to personal jurisdiction in this judicial district by virtue of, *inter alia*, its continuous and systematic contacts with New York, including being incorporated in this judicial district, and its intent to sell and sales of its products in this judicial district.

10. Upon information and belief, CJ Corp. is subject to personal jurisdiction in this judicial district by virtue of, *inter alia*, its continuous and systematic contacts with New York, including incorporating its U.S. headquarters, CJ America, in this judicial district. In addition, CJ Corp. directs CJ America and CJ Indonesia to facilitate the distribution, marketing, offer for sale, or sale of products in this judicial district and maintains and exerts control over trademarks associated with products sold by CJ America in this judicial district.

11. Upon information and belief, CJ Indonesia is subject to personal jurisdiction in this judicial district by virtue of, *inter alia*, its continuous and systematic contacts with the state of New York, including without limitation CJ Indonesia's manufacture and importation of products to facilitate CJ America's distribution, marketing, offer for sale, or sale of products in this judicial district.

BACKGROUND

Ajinomoto's Amino Acids Business

12. Ajinomoto Co. was founded over 100 years ago, and currently employs over 30,000 people in 26 countries and areas around the world. Ajinomoto Co. takes its name from the world's first commercially-engineered amino acid product, a monosodium glutamate ("MSG") flavoring that it introduced in 1909 under the trade name "AJI-NO-MOTO." Ajinomoto Co. has focused on the development, manufacture, and sale of amino acid products, and currently enjoys worldwide recognition as a leader in the technologically demanding field of amino acid research, development, and production.

13. Since 1960, amino acids have been added to animal feed as a means of improving the growth of livestock. Ajinomoto Co. launched its feed-grade amino acids business in 1965, and has since built an international production and supply network as the world's leading manufacturer of feed-grade amino acids. One such amino acid feed additive is L-tryptophan.

14. Ajinomoto Co.'s North American business activities, including the sale of products containing L-tryptophan, are managed in part by Ajinomoto Co.'s wholly-owned subsidiary, Heartland. Heartland markets, sells, and distributes cost effective feed-grade amino acids, including L-tryptophan, and coordinates groundbreaking research and development in the field of commercial amino acids production.

Ajinomoto's Patented Technology

15. The technology at issue relates generally to the production of amino acids through the fermentation of certain microorganisms, including bacterial strains such as *Escherichia coli* ("*E. coli*").

16. Bacteria, such as *E. coli*, can synthesize all 20 amino acids, whereas animals and humans cannot. Those amino acids that cannot be synthesized in adequate amounts (or still yet, cannot be synthesized at all) by animals and humans are called "essential" amino acids. Essential amino acids must be obtained from external sources, such as through the consumption of food.

17. L-tryptophan is an essential amino acid. Many commonly-used livestock feeds lack sufficient quantities of L-tryptophan to support optimal growth. Supplementing such feeds with exogenous L-tryptophan can help to provide the nutritional balance necessary for optimizing the health and development of livestock animals.

18. Ajinomoto's Asserted Patents are directed to the creation and use of particular bacterial strains for the commercial production of amino acids. Ajinomoto produces a variety of amino acids, including L-tryptophan, according to the processes that are described and claimed in the Asserted Patents.

The '655 Patent

19. U.S. Patent No. 7,666,655, entitled "*Escherichia* Bacteria Transformed with the *yddG* Gene to Enhance L-Amino Acid Producing Activity," issued on February 23, 2010. A certified copy of the '655 Patent is attached to this Complaint as Exhibit 1. Ajinomoto Co. owns the entire right, title, and interest of the '655 Patent. Heartland holds an exclusive license to manufacture, import into, market, use, offer for sale, and sell in the United States feed-grade L-

tryptophan that is produced according to the methods set forth in the ’655 Patent. The ’655 Patent is valid, enforceable, and is currently in full force and effect.

20. The invention of the ’655 Patent relates generally to improved methods for the production of aromatic L-amino acids, including L-tryptophan. *See, e.g.*, ’655 Patent at col. 2:40-57 and 4:20-31. These methods involve the use of novel *E. coli* strains that have been genetically engineered to enhance expression of the *yddG* gene and thus the production of the YddG protein, which in turn increases aromatic L-amino acid production. *See, e.g.*, ’655 Patent at col. 2:40-57 and 4:20-31.

21. Ajinomoto introduced into certain *E. coli* strains genetic modifications that enhance the expression of the *yddG* gene. *See* ’655 Patent at Example 4. Enhancing the expression of the *yddG* gene causes an increase in the amount of YddG protein. *See id*. at col. 6:12-16. And as discussed above, boosting the levels of YddG protein leads to the enhanced production of aromatic L-amino acids, including L-tryptophan. *See id.* at col. 4:20-31, Examples 3 and 5.

22. The ’655 Patent broadly claims the methods described above for the improved production of aromatic L-amino acids, including L-tryptophan, through the use of *E. coli* bacterial strains with enhanced *yddG* gene expression. *See id*. Other claims, not asserted in this proceeding, are directed to the genetically engineered microorganisms that are utilized in practicing the claimed method.

The ’373 Patent

23. U.S. Patent No. 6,180,373, entitled “Microorganisms for the Production of Tryptophan and Process for the Preparation Thereof,” issued on January 30, 2001. A certified copy of the ’373 Patent is attached to this Complaint as Exhibit 2. Ajinomoto Co. owns the

entire right, title, and interest of the ’373 Patent. Heartland holds an exclusive license in the United States to manufacture, import into, market, distribute, use, offer for sale, or sell feed-grade L-tryptophan that is produced according to the methods set forth in the ’373 Patent. The ’373 Patent is valid, enforceable, and is currently in full force and effect.

24. The invention of the ’373 Patent generally relates to improvements in bacterial strains used for the production of L–tryptophan. *See, e.g.*, ’373 Patent at col. 2:1-34. More specifically, the ’373 Patent describes and claims improved methods for producing L-tryptophan that utilize strains of *E. coli* and *Corynebacteria* that are genetically engineered to be resistant to feedback inhibition. *See id*. In essence, the claimed strains ignore the metabolic “stop signals” that would normally limit the production of L-tryptophan.

25. In *E. coli* and *Corynebacteria* strains isolated from nature, the activities of certain enzymes responsible for L-tryptophan biosynthesis are normally subject to regulation via feedback inhibition. *See* ’373 Patent at col. 3:19-35 and 5:30-6:9. Feedback inhibition occurs when the activity of a certain enzyme is inhibited by a direct or indirect product of that enzyme. *See id.* In *E. coli* and *Corynebacteria*, feedback inhibition can inhibit the activity of two of the enzymes that catalyze key steps in the L-tryptophan biosynthetic pathway, anthranilate synthase and phosphoglycerate dehydrogenase. *See id*.

26. The ’373 Patent describes and claims methods for achieving improved tryptophan yields by utilizing *E. coli* and *Corynebacteria* strains that have been genetically engineered to express modified, feedback-resistant versions of both the anthranilate synthase and phosphoglycerate dehydrogenase enzymes. *See, e.g., id.* at col. 2:1-34 and Examples 1, 2, and 5. Other claims, not asserted in this proceeding, are directed to the genetically engineered microorganisms that are utilized in practicing the claimed method.

Defendants' Infringing Activities

27. Defendants' business activities likewise involve the manufacture, use, importation, offer for sale, and sale of feed-grade amino acid products. On information and belief, and without Ajinomoto's permission, Defendants have utilized the strains and methods that are described and claimed in the Asserted Patents for the commercial production of Defendants' feed-grade L-tryptophan products (the "Accused Products"). More specifically, Defendants manufacture their Accused Products according to the methods set forth in at least claims 4, 7, 8, and 20 of the '655 Patent; and claim 10 of the '373 Patent. Following their manufacture, Defendants import the Accused Products into the United States for marketing, distribution, use, offer for sale, or sale. These Accused Products include, without limitation, feed-grade L-tryptophan that is marketed and sold in the United States under Defendants' "BestAmino™" brand.

28. There is substantial evidence that Defendants' Accused Products are manufactured abroad according to the methods set forth in the Asserted Patents, and then imported into the United States for marketing, distribution, offer for sale, and sale. This includes evidence Ajinomoto has gathered through the analysis of a sample of Defendants' feed-grade L-tryptophan that was imported into and sold in the United States (the "CJ Sample").

29. Upon information and belief, the CJ Sample was manufactured by CJ Indonesia "under the license of" CJ Corp., and distributed and guaranteed in the United States by CJ America. Images of the CJ Sample packaging (the "CJ Sample Bag") are attached as Exhibit 3. The front of the CJ Sample Bag identifies the CJ Sample as "Feed Grade, Guaranteed Analysis, L-Tryptophan Minimum 98.0%," which was manufactured by "PT. CHEILJEDANG INDONESIA . . . JAWA TIMUR, INDONESIA, Under The License Of CJ CheilJedang

Corporation, Seoul, Korea." *See* Exhibit 3 at pp. 1 & 2. The rear of the CJ Sample Bag states that the CJ Sample was "DISTRIBUTED AND GUARANTEED BY CJ America Inc., 3500 Lacey Road, Suite 230, Downers Grove, IL 60515 USA." *See id.* at pp. 3 & 4.

30. The CJ Sample was provided for sale in the United States as a result of the combined activities of each of the Defendants. *See id.*

31. Scientific tests were performed on the CJ Sample to determine how it was manufactured. The results of these tests indicate that a tryptophan-producing strain of *E. coli*. was used to manufacture the CJ Sample, as set forth in at least claims 4, 7, 8, and 20 of the '655 Patent; and claim 10 of the '373 Patent.

32. For example, these tests demonstrated that the recombinant *E. coli* strain used to produce Defendants' feed-grade L-tryptophan contained the *yddG* gene, and that the nucleotide sequence of the *yddG* promoter included modifications to enhance the expression of the *yddG* gene. The tests also confirmed that these changes led to an increase in the amount of YddG protein, which in turn improved the ability of Defendants' modified *E. coli* strain to produce L-tryptophan, as set forth in at least claims 4, 7, 8, and 20 of the '655 Patent.

33. These tests also showed that the *E. coli* strain used to produce Defendants' feed-grade L-tryptophan contained mutations in the *serA* and *trpE* genes that express phosphoglycerate dehydrogenase and anthranilate synthase enzymes with K_i values that fall within the ranges that are recited in Claim 10 of the '373 Patent.

34. Ajinomoto expects that further discovery in this matter is likely to reveal additional instances where Defendants have infringed Ajinomoto's Patents by importing into the United States products containing L-tryptophan for marketing, distribution, use, offer for sale, or

sale in the United States. Likewise, additional discovery may demonstrate that Defendants infringe additional claims of the Asserted Patents.

COUNT I

INFRINGEMENT OF THE ’655 PATENT UNDER 35 U.S.C. § 271(G)

35. Ajinomoto incorporates by reference paragraphs 1–34 of this Complaint as if fully set forth herein.

36. CJ Indonesia, acting alone or under the direction or control of CJ Corp. or CJ America, manufactures feed-grade L-Tryptophan according to the methods set forth in at least claims 4, 7, 8, and 20 of the ’655 Patent.

37. One of the Defendants, acting alone, in concert, or under the direction or control of one or more of the other Defendants, imports the Accused Products made by CJ Indonesia into the United States. That infringing feed-grade L-tryptophan is neither materially changed through subsequent processes nor incorporated as a nonessential component of another product.

38. One of the Defendants, acting alone, in concert, or under the direction or control of one or more of the other Defendants, markets, distributes, offers for sale, or sells the Accused Products made by CJ Indonesia in the United States.

39. Pursuant to 35 U.S.C. § 271(g), one or more Defendants have infringed and continue to infringe the ’655 Patent.

COUNT II

INFRINGEMENT OF THE ’373 PATENT UNDER 35 U.S.C. § 271(G)

40. Ajinomoto incorporates by reference paragraphs 1–39 of this Complaint as if fully set forth herein.

41. CJ Indonesia, acting alone or under the direction or control of CJ Corp. or CJ America, manufactures feed-grade L-Tryptophan according to the methods set forth in claim 10 of the ’373 Patent.

42. One of the Defendants, acting alone, in concert, or under the direction or control of one or more of the other Defendants, imports the Accused Products made by CJ Indonesia into the United States. That infringing feed-grade L-tryptophan is neither materially changed through subsequent processes nor incorporated as a nonessential component of another product.

43. One of the Defendants, acting alone, in concert, or under the direction or control of one or more of the other Defendants, markets, distributes, offers for sale, or sells the Accused Products made by CJ Indonesia in the United States.

44. Pursuant to 35 U.S.C. § 271(g), one or more Defendants have infringed and continue to infringe the ’373 Patent.

COUNT III

INDUCED INFRINGEMENT OF THE ’655 PATENT UNDER 35 U.S.C. § 271(B)

45. Ajinomoto incorporates by reference paragraphs 1–44 of this Complaint as if fully set forth herein.

46. As explained above in Count I, one or more Defendants infringes the ’655 patent under 35 U.S.C. § 271(g).

47. Defendants know or should know that the importation, offer for sale, or sale in the United States of feed-grade L-Tryptophan manufactured by CJ Indonesia infringes at least claims 4, 7, 8, and 20 of the ’655 Patent.

48. One of the Defendants, acting alone, in concert, or under the direction or control of one or more of the other Defendants, and with specific intent, has induced or continues to

induce infringement of the ’655 Patent, by directing the manufacture, import, use, offer for sale, or sale of the Accused Products in the United States.

49. Pursuant to 35 U.S.C. § 271(b), one or more Defendants have and continue to induce infringement of the ’655 Patent.

COUNT IV

INDUCED INFRINGEMENT OF THE’373 PATENT UNDER 35 U.S.C. § 271(B)

50. Ajinomoto incorporates by reference paragraphs 1–49 of this Complaint as if fully set forth herein.

51. As explained above in Count II, one or more Defendants infringes the ’373 patent under 35 U.S.C. § 271(g).

52. Defendants know or should know that the importation, offer for sale, or sale in the United States of feed-grade L-Tryptophan manufactured by CJ Indonesia infringes at least claim 10 of the ’373 Patent.

53. One of the Defendants, acting alone, in concert, or under the direction or control of one or more of the other Defendants, and with specific intent, has induced or continues to induce infringement of the ’373 Patent, by directing the manufacture, import, use, offer for sale, or sale of the Accused Products in the United States.

54. Pursuant to 35 U.S.C. § 271(b), one or more Defendants have and continue to induce infringement of the ’373 Patent.

PRAYER FOR RELIEF

WHEREFORE, Plaintiffs Ajinomoto Co. and Heartland respectfully request that this Court enter a judgement against Defendants CJ Corp., CJ America, and CJ Indonesia, granting the following relief:

A. finding Defendants liable to Plaintiffs under 35 U.S.C. § 271(g), for infringement of at least claims 4, 7, 8, and 20 of the ’655 Patent; and claim 10 of the ’373 Patent;

B. finding Defendants liable to Plaintiffs under 35 U.S.C. § 271(b), for inducing infringement of at least claims 4, 7, 8, and 20 of the ’655 Patent; and claim 10 of the ’373 Patent;

C. permanently enjoining Defendants, their officers, agents, servants, employees, and attorneys, and those other persons or entities in active concert or participation with them, from infringing any claim of the ’655 and ’373 Patents under 35 U.S.C. § 271;

D. awarding Plaintiffs damages adequate to compensate them for Defendants’ infringement of the patents-in-suit, together with prejudgment interest thereon; and

E. declaring this an exceptional case and awarding Plaintiffs their reasonable attorney fees pursuant to 35 U.S.C. § 285, costs of suit, and such further and additional relief as this Court deems just and proper.

JURY DEMAND

Plaintiffs demand a jury trial on all issues triable to a jury in this matter.

Dated: May 10, 2016

Respectfully submitted,

/s/ Naresh Kilaru

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