

**IN THE UNITED STATES DISTRICT COURT
FOR DISTRICT OF DELAWARE**

IMPOSSIBLE FOODS INC.,)	CASE NO.:
)	
Plaintiff,)	COMPLAINT FOR DAMAGES AND
)	INJUNCTIVE RELIEF
v.)	
)	
MOTIF FOODWORKS, INC.,)	JURY TRIAL DEMANDED
)	
Defendant.)	
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Plaintiff Impossible Foods Inc. (“Impossible Foods”) brings this Complaint against defendant Motif FoodWorks, Inc. (“Motif” or “Defendant”) and alleges, on personal knowledge as to its own actions and on information and belief as to the actions of others, as follows:

THE PARTIES

1. Plaintiff Impossible Foods is a Delaware corporation with its principal place of business at 400 Saginaw Drive, Redwood City, California. Impossible Foods develops and distributes plant-based meat products, including the well-known IMPOSSIBLE BURGER, IMPOSSIBLE SAUSAGE and IMPOSSIBLE MEATBALLS (“IMPOSSIBLE Products”).

2. Defendant Motif is a Delaware corporation with its principal place of business at 27 Drydock Avenue, Boston, Massachusetts. Defendant advertises itself as a provider of plant-based food ingredients, ingredient systems, and finished formulations of plant-based food.

3. Founded in 2011, Impossible Foods seeks to restore biodiversity and reduce the impact of climate change by transforming the global food system. To do this, it makes delicious, nutritious, affordable, and sustainable meat from plants. Impossible Foods’ innovative approach to food science, powered by proprietary research and patent-protected

technology, has allowed it to develop plant-based foods, including the award-winning IMPOSSIBLE BURGER, that recreates the entire sensory experience of eating meat despite being made from plants, without any actual meat or meat-derived ingredients. Impossible Foods has invested hundreds of millions of dollars in the research and development of these market-leading meat alternatives and has secured patents covering its innovative ingredients, food products and manufacturing processes.

4. Defendant has sought to compete with Impossible Foods with ingredients and products that allegedly taste, smell and feel like meat.

5. Impossible Foods brings this action for damages and injunctive relief to protect its innovative technology and products against Defendant's patent infringement.

NATURE OF THE ACTION

6. This is an action for patent infringement under title 35 of the United States Code.

7. As set forth in more detail below, Defendant has been infringing Impossible Foods' patents, including at least United States Patent No. 10,863,761 ("the '761 Patent"), and continues to do so through the present date.

8. Impossible Foods thus seeks injunctive relief against Defendant's infringement of its patent, as well as damages for Defendant's past and ongoing patent infringement.

JURISDICTION AND VENUE

9. This Court has subject matter jurisdiction of this suit for patent infringement pursuant to 28 U.S.C. §§ 1331 and 1338(a).

10. This Court has personal jurisdiction over Defendant because Defendant is incorporated in the State of Delaware.

11. Venue is proper in this District under 28 U.S.C. § 1400(b), because Defendant is incorporated in, and thus resides in, this District.

BACKGROUND

A. Impossible Foods' Innovative Technology and Patents

12. Founded in 2011 by Dr. Patrick O. Brown, Impossible Foods is a food innovator and seeks to develop and sell delicious, nutritious, affordable, and sustainable meat made from plants.

13. Early in its history, Impossible Foods assembled a team of scientists for an ambitious research investigation: determining which biological molecules make meat look, cook, and taste the way it does. The company discovered that heme, a biological molecule involved in oxygen transport, is a central component of meat's appeal, leading to meat's savory flavor and aroma and influencing how meat cooks. Specifically, heme is "the molecule that gives meat its bloody taste when raw and creates the intense, meaty flavors and aromas when it's cooked."¹ Impossible Foods set out to make plant-based foods that incorporate heme to replicate the taste, aroma, and overall sensory experience of meat. The IMPOSSIBLE Products include heme.

14. The heme in the IMPOSSIBLE Products is part of a hemoprotein molecule called soy leghemoglobin, or LegH. LegH occurs naturally in the root nodules of soy plants and, on information and belief, is not naturally produced in the body of any animal species. Impossible Foods discovered that the inclusion of leghemoglobin "transformed what would

¹ <https://impossiblefoods.com/blog/how-gmos-can-save-civilization-and-probably-already-have>

otherwise have been a dull tasting veggie burger into [] meat! And the meat cooked, smelled and tasted like meat from a cow.”²

15. LegH can be produced by growing soy plants, harvesting the root nodules, and isolating the hemoprotein—but Impossible Foods discovered that this process was too inefficient for commercial production. Impossible Foods thus developed a proprietary strain of genetically modified *Pichia* yeast that produces LegH through a fermentation process.

16. Impossible Foods released IMPOSSIBLE BURGER in 2016 and reformulated it in 2019. IMPOSSIBLE BURGER is a meat replica product that replicates the flavor and texture of ground beef and can be used as a hamburger meat replacement for multiple applications. IMPOSSIBLE BURGER has won numerous awards, including “Best of the Best” at the 2019 Consumer Electronics Show, and is available in thousands of restaurants and grocery stores nationwide.

17. Impossible Foods has applied for, and has been awarded, patents regarding many elements and aspects of the manufacturing and composition of heme-containing meat replica products.

18. On December 15, 2020, the United States Patent and Trademark Office issued U.S. Patent No. 10,863,761 to Impossible Foods, entitled “Methods and Compositions for Consumables.” A true and correct copy of the ’761 Patent is attached as Exhibit 1.

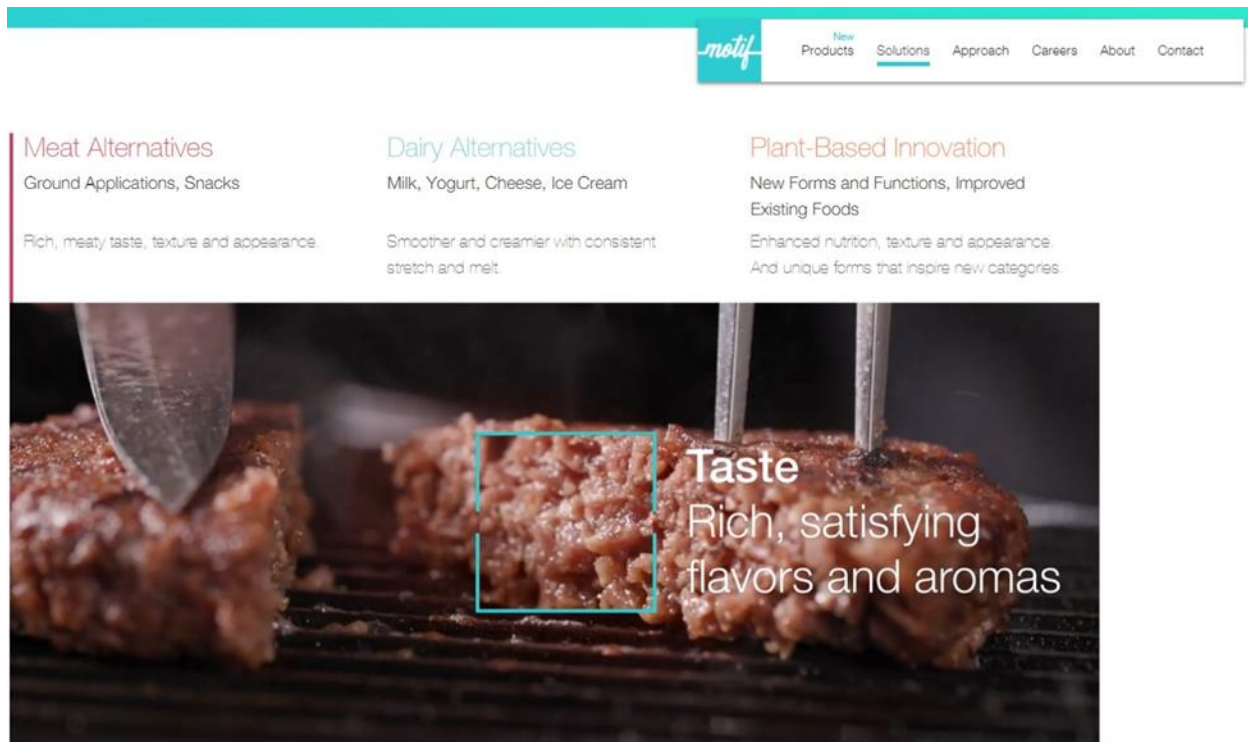
B. Defendant’s Product Development

19. Defendant spun out of Ginkgo Bioworks Inc. (“Ginkgo Bioworks”), a genetic engineering company, in early 2019. Ginkgo Bioworks is still a major investor in Defendant.

² <https://impossiblefoods.com/blog/heme-health-the-essentials>

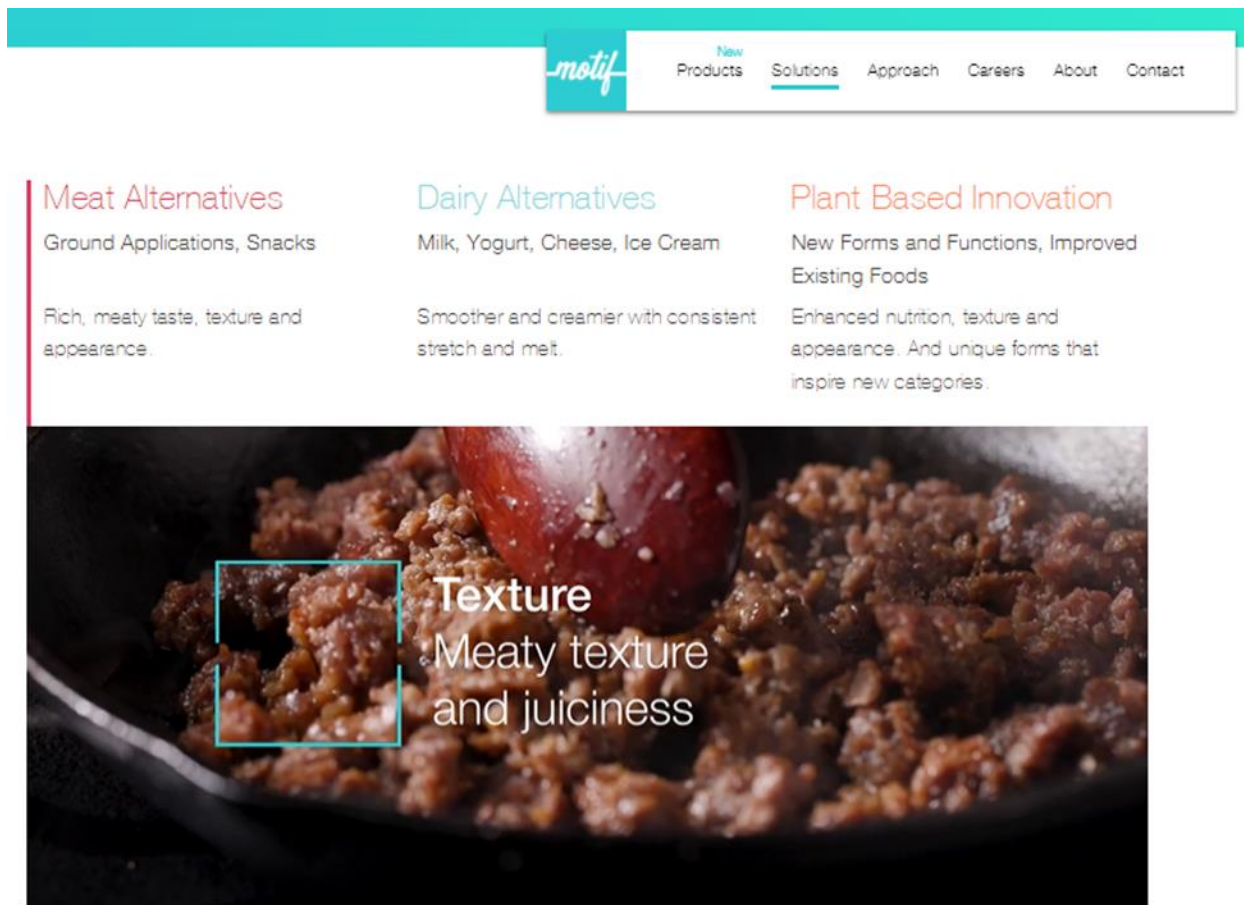
20. Defendant describes its products as “Meat alternative options that consumers crave.”

21. On its website, Defendant advertises that it sells “individual ingredients,” “ingredient systems,” and “finished formulations” of “plant-based food.” Defendant includes pictures of various foods that purportedly replicate the “taste, texture and appearance” of meat. For instance, Defendant’s website depicts the following with respect to taste:



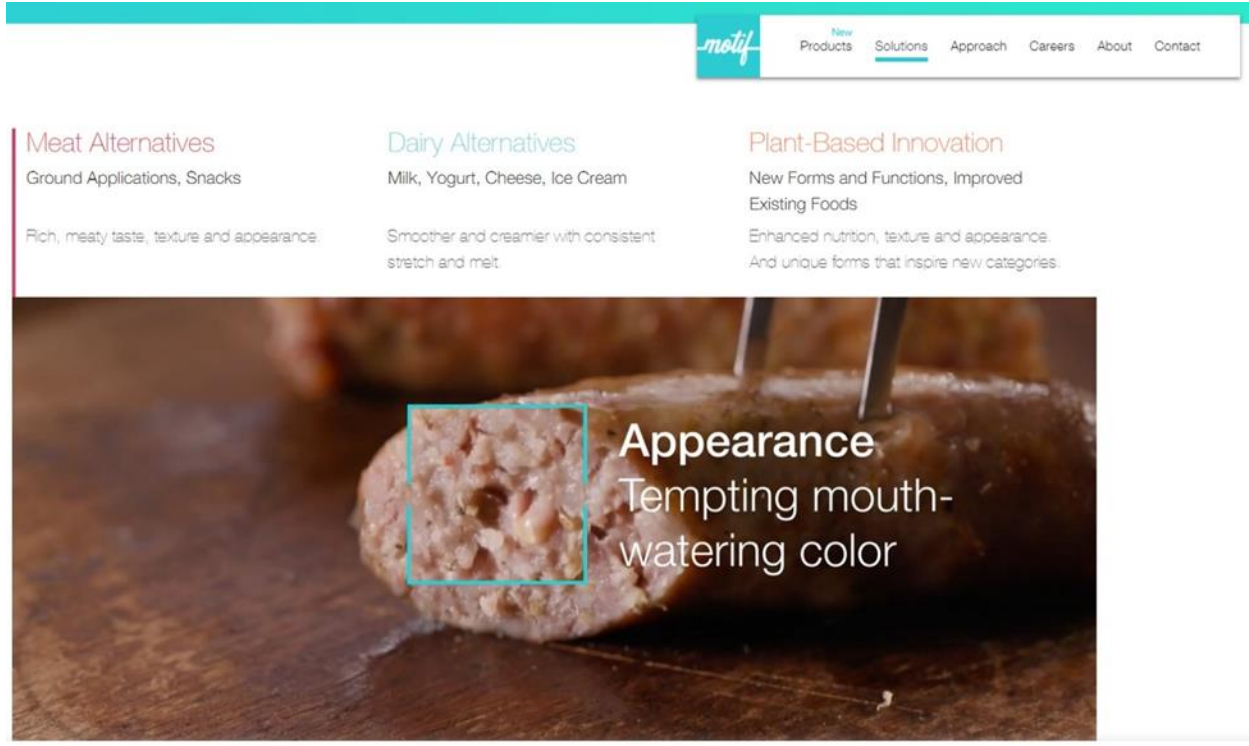
<https://madewithmotif.com/solutions/>

22. Defendant's website depicts the following with respect to texture:



<https://madewithmotif.com/solutions/>

23. Defendant's website depicts the following with respect to appearance:



<https://madewithmotif.com/solutions/>

24. Defendant markets meat alternatives that include the ingredient HEMAMI, which purportedly provides “meat alternatives” with “[t]he real umami flavors, appearance and aromas of meat.”³ Its website notes that HEMAMI “tastes and smells like meat because it uses the same naturally occurring heme protein” and bestows “[m]outh-watering aromas that engage the senses—while cooked and right before you take your first bite.”⁴

25. As Defendant's website notes, HEMAMI contains heme.

26. In an April 2021 submission to the Food and Drug Administration (FDA) Office of Food Additive Safety (hereinafter “the Motif GRAS Notice”), Defendant stated that “Motif

³ <https://madewithmotif.com/solutions/>

⁴ <https://madewithmotif.com/solutions/>

FoodWorks' myoglobin ingredient is a liquid flavoring preparation (herein referred to as Myoglobin Preparation) containing myoglobin produced by fermentation from a modified strain of *Pichia pastoris* expressing the myoglobin gene from *Bos taurus*." A true and correct copy of the Motif GRAS Notice is attached as Exhibit 2.

27. On information and belief, HEMAMI contains the bovine myoglobin preparation that is the subject of the Motif GRAS Notice.

C. Defendant's Infringing Products and Activities

28. Defendant has made and demonstrated a replica burger at trade shows, including the Plant-Based World Expo in New York in December 2021. Defendant also announced plans to demonstrate the replica burger at Natural Foods Expo West and at Future Food-Tech SF in California. The replica burger that Defendant demonstrated infringes the '761 Patent.

29. Defendant's replica burger includes its HEMAMI ingredient.

30. In the summer of 2021, Defendant partnered with Coolgreens, a restaurant chain with a location in Dallas, TX, to produce and sell replica burger products containing HEMAMI. Defendant and Coolgreens sold infringing products from Coolgreens' Dallas restaurant.

31. On information and belief, Defendant has had opportunities to obtain non-public information regarding Impossible Foods' proprietary yeast and methods of making its proprietary heme-containing protein.

32. Defendant recently launched HEMAMI for sale to customers with intent that customers integrate HEMAMI into their own plant-based meat alternatives.

33. Defendant is currently constructing a research, development, and production facility in Massachusetts that it intends to use for fermentation, ingredient production, and finished product production, including, on information and belief, manufacturing the heme-

containing bovine myoglobin included in HEMAMI, production of HEMAMI, and production of finished products integrating HEMAMI. Defendant plans for the facility to be fully online this year.

34. Solar Biotech, which has a facility in Virginia that has been used to manufacture HEMAMI, also announced, on January 28, 2022, that it would continue to manufacture HEMAMI for Defendant.

35. On information and belief, the finished meat replica products that include HEMAMI and which Defendant has sold, offered for sale, and/or demonstrated for marketing purposes directly or indirectly infringe the '761 Patent.

36. Defendant is and has been aware that the inclusion of HEMAMI in meat replica products is a violation of Impossible Foods' patent rights and has touted HEMAMI as a substitute for Impossible Foods' patented technology in its marketing communications.

37. For example, Defendant's official Twitter account, @motiffoodworks, retweeted a link to an article in The Spoon, a food technology trade publication, from February 7, 2022. That article stated that the launch of HEMAMI "is good news if you're a maker of alt-meat products who wants to replicate Impossible's proprietary plant-based heme, because now instead of spending tens of millions trying to build it yourself, now you can buy a similar technology from Motif."⁵

38. As another example, Defendant's CEO, Jonathan McIntyre, provided a quote pertaining to Defendant's new Massachusetts facility that was included in a December 8, 2021 article in Vegconomist, a vegan industry trade publication. That article noted that "heme

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<https://twitter.com/RethinkFoodVC/status/1490690290147078145?s=20&t=DD9WjVymcPhHCw3z0SpqUA>

represented Impossible Foods' most closely-guarded flavor secret, and the \$2 billion company held exclusive patent rights and knowledge on producing and commercializing it.”⁶

39. In addition, Ginkgo Bioworks' CEO, in an article announcing a round of fundraising completed by Defendant, described Defendant's strategy as follows: “We'll brew up the next 100 hemes so that we can see many more Impossible Burgers in the next few years.”⁷

COUNT I: INFRINGEMENT OF THE '761 PATENT

40. Impossible Foods incorporates and re-alleges ¶¶ 1-39 as though fully stated herein.

41. Impossible Foods is the owner of all right, title, and interest in and to the '761 Patent. Impossible Foods has the exclusive right to make, use, sell, and offer to sell any product embodying the '761 Patent throughout the United States, and to import any product embodying the '761 Patent into the United States.

42. The '761 Patent claims and describes an invention comprising a beef replica product, which comprises a) a muscle replica comprising 0.1%-5% of a heme-containing protein, at least one sugar compound and at least one sulfur compound; and b) a fat tissue replica comprising at least one plant oil and a denatured plant protein, wherein said muscle replica and fat tissue replica are assembled in a manner that approximates the physical organization of meat.

43. On information and belief, Defendant has been and is now infringing at least claim 1 of the '761 Patent in the United States by, among other things, directly or through intermediaries, making, using, selling, and/or offering for sale an imitation burger including

⁶ <https://vegconomist.com/products-launches/motif-foodworks-heme/>

⁷ <https://www.inc.com/jeff-bercovici/motif-food-biotech.html>

HEMAMI (the “Infringing Burger”), which is covered by one or more claims of the ’761 Patent, to the injury of Impossible Foods. In particular, the Infringing Burger is a beef replica product comprising a) a muscle replica comprising 0.1%-5% of a heme-containing protein, at least one sugar compound and at least one sulfur compound; and b) a fat tissue replica comprising at least one plant oil and a denatured plant protein, wherein said muscle replica and fat tissue replica are assembled in a manner that approximates the physical organization of meat.

44. Defendant is directly infringing, literally and/or under the doctrine of equivalents, the ’761 Patent. Defendant is thus liable for infringement of the ’761 Patent pursuant to 35 U.S.C. § 271(a).

45. Defendant infringes the ’761 Patent because it makes, uses, sells and/or offers for sale the invention of the ’761 Patent. In particular, Defendant infringes at least claim 1 of the ’761 Patent by making, using, selling and/or offering for sale the Infringing Burger.

46. On information and belief, Defendant will continue to infringe the ’761 Patent unless enjoined.

47. Defendant contributes to infringement of the ’761 Patent under 35 U.S.C. § 271(c) inasmuch as it provides a component of the Infringing Burger, *e.g.*, HEMAMI, which constitutes a material part of Impossible Foods’ invention, to another, knowing the same to be especially made or especially adapted for use in infringement of the ’761 Patent.

48. On information and belief, Defendant will continue to contribute to infringement of the ’761 Patent unless enjoined.

49. Defendant actively encourages its business partners to make, use, sell, and/or offer for sale the Infringing Burger. Defendant is aware of Impossible Foods’ proprietary

IMPOSSIBLE BURGER. Moreover, Defendant is aware of the '761 Patent. Despite such knowledge, Defendant has actively induced its business partners to make, use, sell, and/or offer for sale the Infringing Burger in a way that constitutes infringement. Defendant has encouraged this infringement with a specific intent to cause its business partners and customers to infringe. Defendant's acts thus constitute active inducement of patent infringement in violation of 35 U.S.C. § 271(b).

50. On information and belief, Defendant will continue to induce infringement of the '761 Patent unless enjoined.

51. Defendant's direct infringement, contributory infringement, and inducement of infringement have irreparably harmed Impossible Foods.

52. Pursuant to 35 U.S.C. § 284, Impossible Foods is entitled to damages adequate to compensate for Defendant's infringement.

53. Defendant's infringement has been and is willful and, pursuant to 35 U.S.C. § 284, Impossible Foods is entitled to treble damages. Defendant's willful infringement is based at least on Defendant's knowledge of Impossible Foods, its manufacturing techniques, its products, and its patents (*see, e.g.*, ¶¶ 26, 36-39, *supra*). Defendant's conduct is egregious as it has continued offering, selling, making and/or using the Infringing Burger despite knowledge of the infringement. Defendant has either willfully and wantonly infringed the '761 Patent or has recklessly avoided knowledge of its own infringement, even when faced with knowledge of Impossible Foods' own products and patents.

54. This case is "exceptional" within the meaning of 35 U.S.C. § 285, and Impossible Foods is entitled to an award of attorneys' fees.

DEMAND FOR A JURY TRIAL

Impossible Foods demands a jury trial on all issues so triable.

PRAYER FOR RELIEF

WHEREFORE, Impossible Foods demands judgment as follows:

- a. Judgment that Defendant has infringed and is infringing the '761 Patent;
- b. That Impossible Foods be granted injunctive relief against Defendant and its officers, employees, agents, servants, attorneys, instrumentalities, and/or those in privity with them, to prevent the recurrence of the infringing activities complained of herein, including ceasing manufacture, use, sale, offering for sale, and importation of the Infringing Burger, ceasing contribution to and/or inducement of others to do the same, and for all further proper injunctive relief pursuant to 35 U.S.C. § 283;
- c. Judgment that Defendant account for and pay to Impossible Foods all damages and costs incurred by Impossible Foods, caused by Defendant's infringing activities complained of herein;
- d. Judgment that Defendant has willfully infringed the '761 Patent and an increase in the damages award to Impossible Foods up to three times the amount assessed, pursuant to 35 U.S.C. § 284;
- e. That Impossible Foods be granted pre- and post-judgment interest on the damages;
- f. That this Court declare this case exceptional and award Impossible Foods reasonable attorneys' fees and costs in accordance with 35 U.S.C. § 285; and
- g. That Impossible Foods be granted such other and further relief as the Court may deem just and proper under the circumstances.

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Dated: March 9, 2022

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