IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

CRYOLIFE, INC.,	)	
	)	
Plaintiff,	)	
	)	
v.	)	C.A. No. 14-559 (SLR)
	)	
C.R. BARD, INC., DAVOL, INC. and MEDAFOR, INC.,	)	REDACTED - PUBLIC VERSION
	)	
Defendants.	)	

MEDAFOR, INC.'S OPENING BRIEF IN SUPPORT OF ITS MOTION FOR A PRELMINARY INJUNCTION

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* All Exhibits ("Ex.") referred to herein are attached to the Skelley Declaration being filed herewith.

I. INTRODUCTION AND SUMMARY OF ARGUMENT

After asking this Court to decide whether CryoLife's PerClot products would infringe any valid claim of Medafor's U.S. Patent No. 6,060,461 ("the '461 patent")—but before awaiting a decision—CryoLife launched its PerClot Topical product into the U.S. market.[1] CryoLife's infringing copies directly compete with Medafor's patented products, will erode prices, and will damage Medafor's goodwill and customer relationships. Medafor seeks this Court's intervention.

CryoLife knows that PerClot infringes Medafor's '461 patent. Six years ago, CryoLife entered into an exclusive agreement to distribute Medafor's ARISTA™ AH product, a hemostatic (blood clotting) agent—which CryoLife concedes is "a commercial embodiment of the '461 patent." D.I. 17 at ¶ 19. As Medafor's distributor, CryoLife had access to Medafor's patented technology and marketing strategy. But CryoLife had a falling out with Medafor and, after its bid for a hostile takeover of Medafor failed, teamed up with a former Medafor Vice President, David Lang, whose company, Starch Medical, copied Medafor's technology and marketed it as PerClot. CryoLife began selling PerClot in Europe in September 2010, dramatically cutting into Medafor's business. It brags to investors that it intends to do the same thing here. Ex. 1 at 5.

Yet, before switching sides, CryoLife (rightly) asserted that PerClot infringed the '461 patent, and even sued Medafor for not aggressively asserting its patent rights against PerClot.[2] Now that

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[1] It is unclear when PerClot launched in the U.S. CryoLife's complaint alleged that it "plan[ned]" to launch "by summer 2014." D.I. 17 ¶39. It then posted a website dated August 1 stating that a launch was "scheduled for September 2." Medafor forwarded this website to CryoLife's counsel along with a request that CryoLife allow the Court an opportunity to address the merits of its action before launching. Ex. 32. CryoLife refused. Ex. 42. On September 2, Medafor searched but could not find any announcement that PerClot had launched. It asked CryoLife to tell it if and when PerClot launched. Ex. 43. CryoLife refused, pointing Medafor back to the same website Medafor previously had sent it that merely said (and still says) a launch was "scheduled." Medafor did not learn that PerClot had actually launched until September 10 when it received a report that PerClot had been demonstrated by a salesperson and used by vascular surgeons.

[2] Medafor was unable to assert the '461 patent at that time because—unlike CryoLife today—Starch Medical was not engaged in infringing activity *in the United States*.

CryoLife wants to sell PerClot it sings a different tune. CryoLife contends that the very same competing PerClot product that it once said infringed the "main patent" protecting Medafor's ARISTA™ AH now infringes no "valid claim" of that patent. In the four months since invoking this Court's jurisdiction, however, CryoLife has not identified a single element of a single claim that it contends is not infringed—not even in its answer to Medafor's counterclaim. And the only prior art references CryoLife identifies in support of its invalidity assertion were considered and rejected by the PTO when the '461 patent was reexamined. Indeed, CryoLife's unsubstantiated assertions of invalidity cannot be reconciled with its previous position, when it was Medafor's distributor, that Medafor should seek *expanded* patent protection for the Arista products.

Because CryoLife launched its competing product in the U.S. before this Court—or the U.S. District Court for the District of Minnesota, to which the case should ultimately be transferred—could rule, Medafor seeks emergency relief. Here the preliminary injunction factors are readily satisfied.

First, there can be no serious debate that CryoLife's products infringe the '461 patent—CryoLife itself said so before joining forces with Starch Medical. Medafor's expert Dr. Schwaitzberg has analyzed CryoLife's product and explains in detail how each limitation of six claims of the '461 patent is satisfied by PerClot. Given the presumption of validity, particularly after the '461 patent was examined *twice*, and CryoLife's failure to identify any prior art not before the PTO, it is likely Medafor will prevail on CryoLife's invalidity assertions.

Second, sales of PerClot in the United States will irreparably harm Medafor by directly competing with Medafor's patented ARISTA™ AH and HemaDerm™ products. This is a direct-competitor case, and these are Medafor's only products, which occupy a unique position in the U.S. market. Indeed, seven years after Medafor's launch, they have been the only commercially available plant-based hemostatic agents in the U.S. approved and marketed for surgery that enhance clotting

and achieve hemostasis within minutes and full absorption within 24-48 hours.[3] Not only will Medafor lose sales of its patented products, entry by CryoLife will depress prices and harm Medafor's customer relationships. And regardless of the effect on pricing, unless PerClot is pulled from the market, CryoLife's aggressive marketing of its products in direct competition with Medafor's will irreparably damage Medafor's reputation and goodwill. The effects of CryoLife's competition in Europe have been substantial in eroding Medafor's business, and CryoLife has made clear its intent to do the same here. If PerClot is taken off the market only after a trial on the merits, the damage to Medafor's pricing, reputation, and goodwill already will has been done.

Third, the balance of hardships strongly favors Medafor. CryoLife has only just begun marketing PerClot in the U.S.—and chose to launch PerClot despite Medafor's request that CryoLife first allow the Court to address this case on the merits.[4] In addition, PerClot accounts for just a small fraction of CryoLife's revenues. Any harm CryoLife may allege cannot outweigh the irreparable harm Medafor will suffer if CryoLife is allowed to destroy the market exclusivity and reputation of Medafor's sole product with its infringing copy.

Finally, the public interest clearly warrants entry of an injunction. There unquestionably is a strong public interest in enforcing patent rights, particularly when the infringing product directly competes with the patentee's product. By contrast, there is no public need for CryoLife's products, precisely because Medafor offers the same products, and no public reliance on CryoLife's products, because they only recently have entered the market. And there is no public interest in obtaining products that infringe valid patents merely because they may cost less—to the contrary, that suppresses investment in life-saving innovations.

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[3] As a result of settlement of a prior infringement litigation, [redacted] Ex. 44.

[4] Ex. 37 (Aug. 25, 2014 Ltr. fr. J. Blumenfeld to M. Bourke).

II. NATURE AND STAGE OF THE PROCEEDINGS

CryoLife filed this declaratory judgment action against Defendants C.R. Bard, Inc. ("Bard"), Davol, Inc. ("Davol"), and Medafor (collectively, "Defendants") seeking a declaration that the '461 patent is invalid and not infringed. D.I. 1. Defendants moved for partial dismissal based on CryoLife's failure to satisfy Rule 8, *see*, *Bell Atl. Corp. v. Twombly*, 550 U.S. 544 (2007), and sought dismissal of Bard and Davol. D.I. 10. Defendants also moved to transfer this case to the District of Minnesota. D.I. 14. CryoLife filed an amended complaint on June 26, 2014, D.I. 17, which suffered from a number of the same defects as the original. Defendants again moved for partial dismissal. D.I. 19. Those motions are pending. Medafor filed an infringement counterclaim, D.I. 37, and now moves for a preliminarily injunction.

III. STATEMENT OF FACTS

A. The '461 Patent

The '461 patent, titled "Topically Applied Clotting Material," issued on May 9, 2000. Ex. 2. The inventor, Dr. James Drake, founded the company now known as Medafor to develop and market that invention. Ex. 3 at 2. Medafor was the exclusive licensee of the '461 patent until 2011, when the '461 patent was assigned to it. Ex. 4. Following a July 2011 request for *ex parte* reexamination, the PTO confirmed the patentability of the original 31 claims of the '461 patent with certain limited amendments and confirmed the patentability of new claims 32-49. Ex. 5 at 8-14. The PTO, thus, has *twice* considered the validity of the patent.

B. The Patented Technology

Surgical hemostats (or blood clotting agents) are used in a wide variety of procedures to control bleeding in order to reduce hemorrhage. Hemostats help provide greater visibility of the surgical site and reduce postoperative complications and the potential for costly transfusions. As the patent explains, "[c]lotting is essential to both the short term and long term process of healing the

wound. In the short term, ... the clotting ... stops blood flow so that excessive blood loss will not occur. In the long term, the clot secures the wound so that additional tissue trauma ... is reduced ...." Ex. 2 at col.1 ll.31-40. Clotting, however, "is a complex biological process, and is categorized as one of the cascading processes in which series of organic/biological chemical reactions must occur in a specific sequence to cause the final effect of protected [sic] the wound." *Id.* at col.1 ll.41-45.

Common treatments for minor bleeding wound management included application of pressure and topical application of an absorptive bandage to the wound surface. *Id.* at col.2 ll. 22-24. For other wounds—including surgical incisions—quicker, more effective treatment is often required. Prior to the claimed invention, technology for wound management included "chemical bandages, or literally polymeric film-forming material over the wound area," *id.* at col.3 ll. 7-9, as well as glues "made from two blood proteins that naturally cause blood to clot," *id.* at col.3 ll. 17-18. But, in addition to being expensive to manufacture, these biological materials had a "strong tendency for tissue irritation" and carried the "risk of contamination by infectious agents such as hepatitis viruses, Human Immuno-Deficiency (HIV) viruses, or prions such as have been related to mad cow disease (bovine spongiform encephalitis) and [CJD] disease." *Id.* at col.3 ll. 19, 24-28.

The '461 patent describes a "system . . . of biotolerable, porous particulates … applied to the surface of a wound with liquid blood thereon." *Id.* at col.3 ll.41-44. The "porous nature of the particulate material, either free-flowing or packaged or restrained on or in a surface, enhances clotting." *Id.* at col.3 ll.44-46. Thus, "[b]leeding from arteries, veins and small capillaries, soft tissue, organs ... can be effectively managed, reduced and eliminated in most cases by application of the particles or beads according to the present invention." *Id.* col.5 ll.60-64.

C. Praise for and Success of the Invention

The inventor, Dr. Drake, was named "Innovator of the Year" by Finance and Commerce Daily Business Newspaper for his invention. Ex. 6. In 2002 and 2003, Medafor received CE-mark

and FDA approval to market the patented invention. It was marketed for surgical applications as ARISTA™ AH in Europe, and for topical wound management applications as HemaDerm™ in the US. Exs. 7-8. In 2006, the FDA approved ARISTA™ AH for use in surgical applications in the U.S. Ex. 9. Sales of ARISTA™ AH and HemaDerm™ have resulted [redacted]. Ex. 10 at 25-28. In 2013, Bard acquired Medafor for approximately $280 million. Ex. 11.

D. CryoLife's Awareness Of The '461 Patent and PerClot's Infringement

CryoLife is fully aware of the value of the '461 patent, as well as its infringement by PerClot. In 2008, CryoLife entered into an exclusive agreement to distribute Medafor's patented ARISTA™ AH under the brand name Hemostase in the cardiac and vascular surgery markets in the U.S. and abroad. Ex. 12; Ex. 33. It launched "Hemostase MPH in the U.S. … in the second quarter of 2008" to much fanfare. Ex. 13. At the time, CryoLife recognized and stated to its shareholders how important Medafor's product was to CryoLife's overall product line, as well as the significance of its patent protection. Ex. 12. It told investors that "the total United States market for a product like Hemostase MPH is about $580 million." *Id.*

A year later, the relationship soured. CryoLife undertook a campaign to secure unfettered access to Medafor's patented technology. It initially made two unsolicited offers to purchase Medafor and then, when those failed, sued Medafor, asserting violations of the parties' agreement, as leverage in what would ultimately be another failed attempt to purchase Medafor, this time through a hostile takeover that 95% of Medafor's shareholders voted against. Ex. 34 at 7-8; Ex. 35. A centerpiece of CryoLife's suit was a demand that Medafor assert its patent rights against Starch Medical, a company founded by former Medafor Vice President David Lang, which was "marketing a product *suspiciously similar to Medafor's patented MPH Product* ...." Ex. 14 at ¶ 101.[5] That product was PerClot—*the very product that CryoLife now is marketing.* Ex. 15. CryoLife contended that it "repeatedly

[5] All emphasis added unless otherwise indicated.

asked Medafor management to take action to defend its IP"—referring to the '461 patent. Ex. 16. CryoLife accused Medafor of failing to assert its "intellectual property rights or demand[] that Starch Medical not infringe those rights." Ex. 14 at ¶ 106. It said Medafor allowed Starch Medical to "launch and commercialize a *competing* product [PerClot] in Europe and other international markets, negatively impacting CryoLife's and Medafor's sales," by "only" obtaining protection for its "main patent" (the '461) in the US, Germany and France. It claimed to have been "damaged ... by Medafor's inaction" "as Starch Medical [wa]s significantly undercutting CryoLife's sales [of Hemostase] on an on-going basis." *Id.* at ¶ 107. The case settled with Medafor paying CryoLife [redacted]

As a result of its litigation with Medafor and its failed hostile takeover, CryoLife lost its agreement to market Medafor's patented Arista products, and "began looking for an alternative product." Ex. 17 at 4. Two years after it had sued Medafor for purportedly not pursuing an infringement action against PerClot, CryoLife entered into an agreement with Starch Medical to begin selling PerClot—the very product with which CryoLife had been competing when it was marketing Medafor's patented product. *Id.* at 5. CryoLife began distributing PerClot in Europe in September 2010. Ex. 18 at 5. CryoLife's marketing of PerClot was, like the product itself, copied from Medafor. In 2008, Medafor marketed ARISTA™ AH as "**Simple, Effective, and Safe**." Ex. 19. Medafor emphasized that it is simple because it was "ready when you are," effective because it "begins clotting on contact," and "uniquely safe" because it was "synthesized from a purified plant polymer." *Id.* Fast-forward to 2011, and CryoLife now promoted PerClot as "**Safe, Simple, and Effective**"—"safe" because it is "100% plant-based," "simple" because it is "[r]eady to use" and "effective" because it "[a]ccelerates the intrinsic clotting cascade." Ex. 20.

CryoLife doubled down on PerClot, investing in Starch Medical and announcing in 2012 that it was working toward a "PerClot US clinical trial and potential approval [in the U.S.]," and

"expected to initiate manufacturing of [PerClot] for [the] clinical trial at [CryoLife's] headquarters facility in Georgia." Ex. 21 at 4. At the same time, however, CryoLife warned its investors of the "significant risks" of patent infringement:

> *If we sell PerClot in the U.S., we will likely end up in a patent infringement* lawsuit, which will be expensive, and if we lose, *we may be prohibited from selling PerClot or may have to pay substantial royalties or damages* when we sell PerClot.

Ex. 22 at 25. Medafor had warned CryoLife that it would infringe the '461 patent if it proceeded with its scheme to sell Starch Medical's PerClot in the U.S., D.I. 17-14, and even after filing this suit CryoLife recently warned investors that it might be enjoined.[6] That day has now come.

IV. ARGUMENT

A preliminary injunction should be granted where the movant shows: (1) a reasonable likelihood of success on the merits; (2) irreparable harm; (3) a balance of hardships tipping in its favor; and (4) that the public interest supports the injunction. *See Sanofi-Synthelabo v. Apotex, Inc.*, 470 F.3d 1368, 1374 (Fed. Cir. 2006).

A. Medafor Is More Than "Reasonably Likely" To Succeed On The Merits

Medafor is likely to prove that the use of PerClot infringes at least 6 claims of the '461 patent, and that CryoLife induces and contributes to this infringement. CryoLife—despite bringing this declaratory action, and despite being pressed by Medafor in not one, but two *Twombly* motions—has failed to identify even a single limitation that is not met. Indeed, CryoLife carefully has alleged throughout only that it does not "infringe any *valid* claim," suggesting infringement may not even be disputed. CryoLife's prior statements that PerClot infringes the '461 patent are consistent with the clear, scientific evidence demonstrating that every limitation is met. Conversely, CryoLife is unlikely to prove by clear and convincing evidence that these claims are invalid—

[6] Ex. 36 at 2 (CryoLife August 1, 2014 "Corporate Update" warning that "[i]f we do not prevail in [our declaratory judgment] action, or if Bard obtains an injunction, ***we may be prohibited from selling PerClot and PerClot Topical in the U.S.***, or we may have to pay substantial royalties or damages when we sell PerClot or PerClot Topical in the U.S.").

particularly given its reliance on references the PTO rejected in reexamining the '461 patent. And having taken the position that it can bring this declaratory judgment action asserting non-infringement and invalidity while refusing to provide any real bases for those claims, CryoLife should not be allowed to do so for the first time in an opposition to this motion.

1. PerClot Infringes, Just As CryoLife Previously Said It Did

a. The Claims Should Be Given Their Plain And Ordinary Meaning

As an initial matter, the claims should be construed according to their ordinary and customary meaning, as understood by a person of ordinary skill in the art at the time of the invention. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc). That is the meaning Medafor and its experts Drs. Schwaitzberg, Haber, and Kulkarni have applied.[7]

b. Use of PerClot Infringes Claim 32

Claim 32 states:

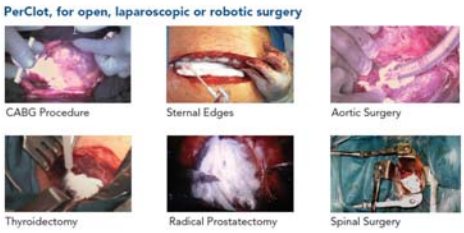
> A method for enhancing the formation of clots in a wound of an animal where blood is present, the method comprising the steps of: applying porous particles having average diameter dimensions of from about 0.5 to 1000 micrometers to at least a portion of said wound where blood is present in said wound; applying pressure to said porous particles in said wound, and allowing said porous particles to remain in contact with said blood in said wound while clotting initiates in said wound.

i. "A method for enhancing the formation of clots in a wound of an animal where blood is present"

Use of PerClot is unquestionably "[a] method of enhancing the formation of clots in a wound of an animal where blood is present." Sch. Dec. ¶¶ 40-46. The patent uses "wound" in its plain and ordinary way: a disruption of the body's tissues. Sch. Dec. ¶ 41; Ex. 23 at 20.

[7] Had CryoLife identified a reason why PerClot supposedly does not infringe, Medafor would know what, if any, elements were in dispute and might need further construction. That is exactly what Rule 8 requires. But CryoLife failed to do so—*twice*. This failure, perhaps designedly, has also impeded Medafor's ability to assess whether CryoLife had any likelihood of success for purposes of obtaining preliminary injunctive relief. Without knowing which elements, if any, CryoLife disputed, Medafor and its experts had no choice but to select some of the patent claims that PerClot infringes and analyze all their elements.

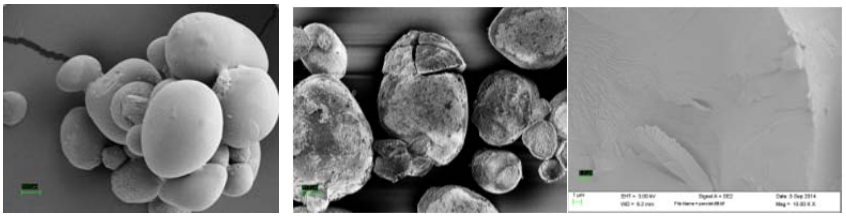
CryoLife identifies treatment of "[b]leeding wounds from surgical sites" as one "intended use[]" for which "PerClot Topical is designed." Ex. 25. CryoLife's brochures and marketing videos for PerClot and PerClot Topical show the porous PerClot particles being applied in wounds in the body where blood is present. Exs. 20, 26-27.



Were there any doubt, CryoLife's application for FDA approval and marketing materials say that PerClot will "promote[] the normal physiological clotting cascade." Ex. 24; *see* Exs. 20, 25. As Dr. Schwaitzberg explains, "the clotting cascade is the second phase of hemostasis and promoting the clotting cascade would enhance the formation of clots." Sch. Dec. ¶ 42.

ii. "applying porous particles having average diameter dimensions of from about 0.5 to 1000 micrometers to at least a portion of said wound where blood is present in said wound";

Use of PerClot also meets the limitation that the method use particles that are "porous" and have average diameter dimensions of "from about 0.5 to 1000 micrometers." The patent uses "porous" to mean containing pores. *See* Ex. 2 at col.3 ll. 41-44; Ex. 28 (defining porous as "of or relating to a material that contains pores"). Dr. Haber has demonstrated PerClot particles both have pores and an average particle diameter of approximately 81 micrometers, falling well within the claimed range. Hab. Dec. ¶¶ 31-38. Below are representative scanning electron microscopy photos showing the particles' pores:



PerClot also satisfies the requirement that the porous particles be applied to at least a portion of the wound where blood is present. The whole point of using PerClot or PerClot Topical is to apply the PerClot particles *in the wound*. Sch. Dec. ¶¶ 48-50.

iii. "applying pressure to said porous particles in said wound"

CryoLife instructs that pressure is to be applied to PerClot when it is used, thus meeting the limitation requiring that pressure be applied to the particles in the wound. The patent uses the word "pressure" in its plain and ordinary sense, which is to apply force directly to a surface. Ex. 23 at 15-16. The PerClot Brochure, describing how to use PerClot, states that once it has been applied to the wound, "[w]ith a dry gauze, hold direct, stable pressure to the bleeding site for several minutes." Exs. 20, Ex. 26. Pressure would also be used in applications of PerClot Topical. Sch. Dec. 51-54.

iv. "allowing said porous particles to remain in contact with said blood in said wound while clotting initiates in said wound"

Finally, PerClot meets the requirement that the porous particles "remain in contact" with the blood "while clotting initiates" in the wound. These terms require that the particles physically touch the blood while clotting begins in the wound. Ex. 23. CryoLife's literature explains that "*[u]pon contact with blood*, PerClot rapidly produces a gelled matrix that adheres to and forms a mechanical barrier with the bleeding tissue." Ex. 30. That is what the limitation requires.

Moreover, CryoLife instructs that PerClot be "appl[ied] to the source of bleeding, covering the entire wound area," which inherently requires physical contact between the particles and the blood. Ex. 20. CryoLife further instructs that, after PerClot is applied to the wound, the user is to "irrigate any excess powder" "[o]nce hemostasis is achieved." *Id.* As explained by Dr. Schwaitzberg, "[f]ollowing these instructions necessarily would result in the particles physically touching the blood while clotting initiates in the wound." Sch. Dec. ¶ 56. Similarly, CryoLife's video shows PerClot being applied in an internal wound, irrigated, and then distributed to the bleeding sites, i.e., the wound. Ex. 27. Once there, the "PerClot granules ... form[] a gelled adhesive

matrix that provides a mechanical barrier to further bleeding and results in the concentration of platelets, red blood cells, and coagulation proteins ... ***at the site of application***." Ex. 25. PerClot's particles therefore remain in contact with the blood while clotting begins. Sch. Dec. ¶¶ 55-59.

c. Use of PerClot Infringes Claim 39

Claim 39 has the same limitations as claim 32, except that the method is for formation of clots "for an internal wound," and it does not require "pressure." The patent uses "internal wound" to refer to wounds inside the body as opposed to merely "external" or "topical" wounds. '461 pat. col. 2 ll. 44-58; Sch. Dec. ¶ 67. The PerClot Brochure shows PerClot being applied to internal wounds in several surgical procedures, and the PerClot Topical video shows PerClot being applied to internal wounds in endoscopic sinus surgery. *Id.* at ¶¶ 68-69. Because PerClot is applied to internal wounds, use of PerClot also infringes claim 39.

d. Use of PerClot Infringes Claims 36 and 42

Claim 36 depends from claim 32 and claim 42 depends from claim 39. Both require that the particles "comprise a crosslinked polysaccharide." PerClot's particles are 100% potato starch, a polysaccharide, Ex. 24, and Dr. Kulkarni's test results show that it is crosslinked. Kul. Dec., Ex. A at 2. Use of PerClot therefore infringes claims 36 and 42. Sch. Dec. ¶¶ 98-100.

2. CryoLife Induces Infringement and Contributorily Infringes

a. Inducement

Inducement requires that the accused infringer have knowledge of the patent-in-suit and that the induced acts constitute infringement. *See Global-Tech Appliances, Inc. v. SEB S.A.*, 131 S. Ct. 2060, 2068 (2011). CryoLife, of course, has been aware of the '461 patent since at least 2008 when it entered into the agreement with Medafor. CryoLife told its investors that ARISTA™ AH was patented. Ex. 12 at 4. ARISTA™ AH and Hemostase were marked with the '461 patent. Ex. 3 at 2; 29 at 5. If that were not enough, when CryoLife was attempting to take over Medafor, it said

PerClot infringed—indeed, CryoLife *sued* Medafor based on the purported failure to assert the '461 patent against PerClot when it was originally launched by Starch Medical. Ex. 14 at ¶¶ 101-06; *see* Ex. 12. CryoLife specifically identified PerClot as "*suspiciously similar to Medafor's patented MPH Product* ...." Ex. 14 at ¶ 101.

Nor can there be any dispute that CryoLife's product brochures, FDA filings, and product videos instruct its customers to use PerClot in a way that infringes the '461 patent. *See* Sch. Dec. ¶¶ 42-45, 48-49, 52, 56-58; Exs. 20, 24-27, 30. These facts alone show CryoLife induces infringement of the '461 patent. *See Golden Blount, Inc. v. Robert H. Peterson Co.*, 438 F.3d 1354, 1364 n.4 (Fed. Cir. 2006); *Allergan, Inc. v. Watson Labs., Inc.*, 869 F. Supp. 2d 456, 518 (D. Del. 2012).

b. Contributory Infringement

Contributory infringement requires a showing that (1) the accused infringer sells a component for use by the third party in a patented method constituting a material part of the invention; (2) "knowing [the component] to be especially made or especially adapted for use in an infringement of such patent and [(3) the component is] not a staple article or commodity of commerce suitable for substantial noninfringing use." 35 U.S.C. § 271(c); *Cross Med. Prods., Inc. v. Medtronic Sofamor Danek, Inc.*, 424 F.3d 1293 (Fed. Cir. 2005). Each is readily satisfied.

First, CryoLife's marketing materials and FDA application make clear that PerClot is intended to be used in Medafor's patented process by doctors and other medical professionals. *Second*, CryoLife advertises PerClot only for use as a hemostatic agent "to control bleeding over large surfaces and localized bleeding areas" and this is the only type of use that it has asked the FDA to approve. Exs. 20, 24, 25. *Third*, there is no known use for PerClot other than an infringing use. *See supra* at 10; Sch. Dec. ¶ 37. Indeed, here CryoLife should be presumed to know PerClot is adapted for infringement and not suitable for substantial noninfringing uses. *See Ricoh Co. v. Quanta Computer Inc.*, 550 F.3d 1325, 1338 (Fed. Cir. 2008).

3. Medafor Is Likely To Overcome Any Validity Challenge By CryoLife

Because "[e]very patent is presumed valid, … if [CryoLife] fails to identify any persuasive evidence of invalidity, the very existence of the patent satisfies [Medafor's] burden on validity." *Purdue v. Boehringer*, 237 F.3d 1359, 1365 (Fed. Cir. 2001). But here, likelihood of success on any validity challenge is even clearer. The patent has been examined and reexamined by the PTO. Again, despite Medafor's *Twombly* motions, CryoLife has failed to identify *any allegedly invalidating reference* other than those considered and rejected by the PTO during reexamination of the '461 patent and to read any claim on these references. *See* D.I. 17 ¶¶ 55-58. It always is a heavy burden to prove invalidity by clear and convincing evidence, and "[w]hen an attacker simply goes over the same ground travelled by the PTO, part of the *burden* is to show that the PTO was wrong in its decision to grant the patent." *Am. Hoist & Derrick Co. v. Sowa & Sons, Inc.*, 725 F.2d 1350, 1360 (Fed. Cir. 1984), *abrogated on other grounds by Therasense, Inc. v. Becton, Dickinson & Co.*, 649 F.3d 1276 (Fed. Cir. 2011). The issuance of a reexamination certificate itself is evidence enough that Medafor likely will prevail on validity. *See, e.g.*, *Auto. Prods. v. Fed.-Mogul Corp.*, 1989 WL 109739, at *3 (E.D. Mich. Jan. 13, 1989); *Red Bend v. Google Inc.*, 2011 WL 1288503, at *16-17 (D. Mass. Mar. 31, 2011).[8]

B. Medafor Will Suffer Irreparable Injury If CryoLife's Infringement Is Not Enjoined

"[T]o satisfy the irreparable harm factor in a patent infringement suit, a patentee must establish … : 1) that absent an injunction, it will suffer irreparable harm, and 2) that a sufficiently strong causal nexus relates the alleged harm to the alleged infringement." *Apple Inc. v. Samsung Elecs. Co.*, 695 F.3d 1370, 1374 (Fed. Cir. 2012). Harm is likely to be irreparable where, as here, the patentee and infringer are direct competitors. *Trebro Mfg., Inc. v. Firefly Equip., LLC*, 748 F.3d 1159, 1171 (Fed. Cir. 2014); *Presidio Components, Inc. v. Am. Tech. Ceramics Corp.*, 702 F.3d 1351, 1363 (Fed.

[8] CryoLife's written description challenge is not even sufficient to meet the requirements of Rule 8 and *Twombly*, much less provide a basis to think CryoLife could prevail by clear and convincing evidence on the merits. *See* D.I. 17 ¶ 57; D.I. 21 at 9-11.

Cir. 2012). Indeed, CryoLife originally entered this market *by distributing Medafor's own patented product*, and having destroyed that relationship, wants to compete in this market in contravention of Medafor's patent rights. "Price erosion, loss of goodwill, damage to reputation, and loss of business opportunities" that arise from competition "are all valid grounds for finding irreparable harm." *Celsis In Vitro, Inc. v. CellzDirect, Inc.*, 664 F.3d 922, 930 (Fed. Cir. 2012); *see Abbott Labs. v. Sandoz, Inc.*, 544 F.3d 1341, 1362 (Fed. Cir. 2008) (collecting cases); *Power Integrations, Inc. v. Fairchild Semiconductor Int'l, Inc.*, 2014 WL 2960035, at *2 (D. Del. June 30, 2014).

1. CryoLife's Direct Competition Will Result In Lower Prices, Fewer Unit Sales, and Lost Market Opportunities for Medafor

PerClot directly competes with ARISTA™ AH and HemaDerm. Arn. Dec. ¶ 18. Indeed, when it was marketing ARISTA™ AH, CryoLife told its investors just that. Ex. 37 at 5. And when Starch Medical began marketing PerClot, CryoLife thought its business selling ARISTA™ AH would be harmed to such a great extent that it sued Medafor before PerClot even was marketed in the U.S. Ex. 14 ¶¶ 97, 107. CryoLife's decision to sell PerClot in the U.S., the largest market for Medafor's patented products, is far more harmful than the behavior CryoLife previously complained of and exacerbates the harm to Medafor.

Now that it is marketing PerClot itself, CryoLife intends to take the competition with Medafor's products to a new level. CryoLife has hired 10-15 sales representatives with previous experience selling hemostatic products to sell PerClot. Ex. 38. These agents will target the same customers and hospitals that use ARISTA™ AH and HemaDerm. Arn. Dec. ¶ 33. Thus, Medafor has a reasonable expectation that competition will erode the prices of its products, decrease sales, and diminish profits. *See Presidio*, 702 F.3d at 1363; Arn. Dec. ¶¶32-36. Moreover, because the customers are often hospitals, the loss of a single customer generally results in the loss of many sales. Ren. Dec. ¶ 6. *See Celsis*, 664 F.3d at 930 (finding irreparable harm where "market was particularly sensitive because customers buy in bulk and at irregular times, such that the loss of a

single sale in this market may be more harmful than for products purchased daily"). Losing a customer base (and the concomitant opportunity for sales) is irreparable harm, as is the overall effect on Medafor's business.

a. The U.S. Market for ARISTA™ AH and HermaDerm™

Medafor's entire business is the sale of ARISTA™ AH and HemaDerm. Arn. Dec. ¶ 16. The surgical indications market is generally divided between low-cost products such as Gel Foam and Surgicel (generally costing $30-50) and high-cost options like FloSeal (approx. $350). *Id.* ¶ 14. The more expensive products are aggressive hemostatic agents but require preparation such as mixing. *Id.* Surgeons typically try to first use less-expensive products to achieve hemostasis. *Id.* If they fail, surgeons migrate to more expensive options. *Id.* ARISTA™ AH is a mid-market hemostat product with a surgical indication. *Id.* [redacted] Until the entry of PerClot, ARISTA™ AH was the only hemostat with a surgical indication in this mid-market price category, and the only commercially available plant-based hemostatic agent in the U.S. in any price category that enhances clotting and achieves hemostasis within minutes and full absorption within 24-48 hours. *Id.* This market position has allowed ARISTA™ AH to experience significant growth [redacted]. *Id.* The entry of PerClot IDE into this very market segment will destroy ARISTA™ AH's mid-market exclusivity. HemaDerm™ is currently sold in ear, nose, and throat ("ENT") kits for topical application. *Id.* ¶ 15. HemaDerm™ sales have been approximately [redacted]. Again, PerClot Topical will compete directly with HemaDerm™. *Id.* ¶ 18.

b. European Competition Indicates That PerClot Will Cause [redacted]

Recent experience in the European market illustrates the irreparable harm CryoLife will cause Medafor. When Starch Medical began marketing PerClot in Germany in 2008, [redacted] Ren. Dec. ¶ 4; Arn. Dec. ¶ 23. [redacted] Arn. Dec. ¶ 26. CryoLife has indicated that it will price PerClot lower than ARISTA™ AH. Ex. 38 ("3 grams of PerClot Topical will be priced lower than 2 grams of Arista."). Thus, in addition to capturing sales that would otherwise be made by Medafor, such pricing will create significant downward pressure on the price of Medafor's own products. Arn. Dec. ¶¶ 20-31. As this Court has recognized, price erosion is itself a form of irreparable harm. *Id.*; *Celsis*, 664 F.3d at 930; *see also Sanofi*, 470 F.3d at 1382-83 (irreparable harm from being "forced to offer discounted rates and price concessions to third-party payors").

[redacted] Indeed, CryoLife boasts that "[w]hen PerClot is approved for use in the U.S. we expect its impact on the competition to be similar to its results in Europe." Ex. 1 at 5. Loss of customers, and the accompanying damage to goodwill, is irreparable harm. Arn. Dec ¶¶ 37-44.

2. CryoLife's Indirect Competition Will Also Result In Lower Prices, Fewer Unit Sales, and Lost Profits for Medafor

In addition to the harm caused through direct, on-label competition, introduction of any of CryoLife's PerClot products will cause irreparable damage to Medafor's surgical product line. Although PerClot Topical is indicated for use "as a topical dressing," physicians are known to use products "off-label." *Id.* 32-36. PerClot Topical is, of course, the same PerClot material as approved for surgical use in Europe and advertised on CryoLife's PerClot website as "approved to be used in a wide array of open and laparoscopic surgical procedures, including neuro, cardiac, vascular, general, spine, gynecology and urology." Ex. 30. Use of PerClot Topical during surgery will compete with Arista—regardless of whether CryoLife receives FDA approval to market PerClot for surgical indications. Arn. Dec. ¶¶ 32-36. CryoLife already has access to U.S. surgical specialists who influence hospital purchasing decisions through the marketing of other products. *Id.* at ¶ 33. Whether or not approved for surgical use, CryoLife is likely to introduce these surgeons to PerClot. *Id.* Any sales of PerClot Topical resulting in off-label use in a surgical setting would cut into Arista sales, depress prices, and damage Medafor's profitability. *Id.* at ¶¶ 32-36.

3. CryoLife's Advertising Of PerClot Will Damage Medafor's Goodwill And Harm Customer Relationships

CryoLife's comparisons between PerClot and Medafor's products will tarnish the goodwill associated with Medafor's ARISTA™ AH and HemaDerm™ brands. Arn. Dec. ¶¶ 37-44. Indeed, CryoLife's existing marketing materials purport to demonstrate advantages of PerClot over ARISTA™ AH (also identified as Hemostase) that are misleading—suggesting that PerClot is the superior product. Wis. Dec. ¶¶ 10-11, Ex. 39. Unless sales of PerClot are enjoined, it will do the same domestically. CryoLife's videos are already accessible in the U.S. albeit with a disclaimer that

"PerClot is not approved for sale it the United States." Ex. 31.[9] Once customers have been given the impression that a product is inferior, it is costly and difficult to re-educate them, regardless of whether the competing product is still available. Arn. Dec. ¶¶ 42-44. Medafor's attempts at re-education in Europe have proven as much. Wis. Dec. ¶¶ 10-11. Such reputational harm to Medafor's brand identity is irreparable. Arn. Dec. ¶¶ 9, 37-45.

4. CryoLife's Infringement Is The Cause Of Medafor's Harm

In determining whether a causal nexus exists between CryoLife's infringing PerClot product and Medafor's inevitable harm, "[t]he relevant question is not whether there is some causal relationship between the asserted injury and the infringing conduct, but to what extent the harm resulting from selling the accused product can be ascribed to the infringement." *Apple*, 695 F.3d at 1375. In this case, CryoLife admits that Medafor's ARISTA and HemaDerm products are themselves embodiments of the patented invention. For the reasons described above, Medafor is likely to prove that the accused product likewise embodies the claimed invention. Thus, the causal relationship is direct and clear. *See, e.g.*, *Scholle v. Rapak*, 2014 WL 1287092, at *6 (N.D. Ill. 2014).

C. The Balance Of Hardships Favors Medafor

Without an injunction, Medafor would be forced "to compete against its own patented invention, with the resultant [irreparable] harms described above, [which] places a substantial hardship on [Medafor]." *Robert Bosch LLC v. Pylon Mfg. Corp.*, 659 F.3d 1142, 1156 (Fed. Cir. 2011). By contrast, any harm to CryoLife would be "the result of its own calculated risk in selling a product with knowledge of [Medafor's] patent," *Celsis*, 664 F.3d at 931, a harm it has anticipated and warned investors of. Ex. 22 at 25. Indeed, "[o]ne who elects to build a business on a product found to

[9] Although the video purports to depict PerClot congealing faster than ARISTA™ AH in water, this does not mean that PerClot is a more effective hemostat. Wis. Dec. ¶ 6. Because blood is approximately 0.9% salt, a more appropriate comparison of PerClot and ARISTA™ AH would involve a saline solution. *Id.* Medafor has performed such a comparison and demonstrated that ARISTA™ AH and PerClot have similar absorption rates. *Id.* ¶ 8.

infringe cannot be heard to complain if an injunction against continuing infringement destroys the business so elected." *Windsurfing Int'l Inc. v. AMF, Inc.*, 782 F.2d 995, 1003 n.12 (Fed. Cir. 1986). CryoLife is well aware of the '461 patent and even initiated this lawsuit purportedly to obtain certainty, but rather than await a decision has decided to launch. Any "harms [to CryoLife] were 'almost entirely preventable." *Sanofi*, 470 F.3d at 1383. In addition, PerClot is but a small part of CryoLife's business, generating only $3.494 million of the company's $140.763 million total revenues in 2013—there is no danger that an injunction would put CryoLife out of business. Ex. 22 at 48. The balance of hardships favors entry of a preliminary injunction. *See Smith Int'l, Inc. v. Hughes Tool Co.*, 718 F.2d 1573, 1581 (Fed. Cir. 1983).

D. The Public Interest Favors Entry Of A Preliminary Injunction

Courts "have long acknowledged the importance of the patent system in encouraging innovation." *See Sanofi,* 470 F.3d at 1383. In particular, investment in the medical field "must be encouraged and protected by the exclusionary rights conveyed in valid patents" and that this "incentive would be adversely affected by taking market benefits away from the patentee and giving them to the accused infringer …." *Celsis*, 664 F.2d at 931-932.

In addition, an injunction would not harm the public because "the public can obtain the product[ ]" from Medafor. *Celsis*, 644 F.3d at 932. Medafor has been supplying ARISTA™ AH since 2006 and HemaDerm™ since 2003. Exs. 8, 9. Medafor is committed to meeting market demand, and has the capacity to do so. Arn. Dec..¶¶ 14-18. Although CryoLife's entry into the market would likely lower the price of Medafor's product, *see supra* at 17-18, "[s]elling a lower priced product does not justify infringing a patent." *Pfizer, Inc. v. Teva Pharm., USA, Inc.*, 429 F.3d 1364, 1382 (Fed. Cir. 2005)(internal quotation marks and citations omitted). The public interest, thus, favors injunctive relief.

V. CONCLUSION

Medafor requests that the Court grant its Motion for a Preliminary Injunction.

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September 19, 2014

CERTIFICATE OF SERVICE

I hereby certify that on September 25, 2014, I caused the foregoing to be electronically filed with the Clerk of the Court using CM/ECF, which will send notification of such filing to all registered participants.

I further certify that I caused copies of the foregoing document to be served on September 25, 2014, upon the following in the manner indicated:

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