

UNITED STATES DISTRICT COURT
DISTRICT OF CONNECTICUT

Applera Corporation and :
Roche Molecular Systems, Inc., :
plaintiffs, :
 :
v. : 3:98cv1201 (JBA)
 :
MJ Research Inc. and Michael :
and John Finney, defendants. :

**Ruling on Plaintiffs' Motion to Enhance Damages and For
Attorneys' Fees Based on Defendants' Willful Infringement [Doc. #
1128]**

Applera Corporation and Roche Molecular System's (collectively, "Applera") suit against defendants MJ Research Inc., Michael Finney and John Finney (collectively, "MJ") for infringement of its thermal cyclers and PCR process patents proceeded to trial in March 2004. On April 2, 2004, the jury returned its verdict, finding that defendants induced infringement of the PCR process patents (U.S. Patent Nos. 4,683,202, 4,683,195, and 4,965,188); directly infringed claim 45 of U.S. Patent No. 5,333,675 and claims 1, 44, and 158 of U.S. Patent No. 5,475,610; induced infringement of claim 16 of U.S. Patent No. 5,656,493, claims 17, 33, and 45 of the '675 patent, and claims 1, 44, and 158 of the '610 patent; and contributed to the infringement of claim 45 of the '675 patent and claims 1, 44, and 158 of the '610 patent.¹ The jury found that the defendants'

¹The jury found that plaintiffs did not prove that defendants directly infringed, induced infringement, or

infringement of the PCR process patents and of the '493 patent was willful. Plaintiffs now move for enhanced damages and attorneys fees based on defendants' willful infringement. For the reasons that follow, plaintiffs' motion is GRANTED.

I. Enhanced Damages

Pursuant to 35 U.S.C. § 284, a court "may increase the damages up to three times the amount" of the compensatory damages. The purpose of an enhanced damages award is punitive, and is meant to punish behavior, such as willful infringement, that is properly characterized as "reprehensible" or "egregious." See Knorr-Bremse Systeme Fuer Nutzfahrzeuge GmbH v. Dana Corp., 383 F.3d 1337, 1348 (Fed. Cir. 2004). "The concept of 'willful infringement' is not simply a conduit for enhancement of damages; it is a statement that patent infringement, like other civil wrongs, is disfavored, and intentional disregard of legal rights warrants deterrence." Id. at 1342. The statutory enhanced damages provision "recognizes the tortious nature of patent infringement and the public interest in a stable patent right." SRI Intern., Inc. v. Advanced Technology, 127 F.3d 1462, 1464 (Fed Cir. 1997).

The decision whether to award enhanced damages under this section involves two steps: (1) a determination of whether the

contributed to the infringement of claims 160 and 161 of the '610 patent, and did not prove that defendants willfully infringed the '675 and '610 patents.

"infringer is guilty of conduct upon which increased damages may be based," such as an act of willful infringement; and if so, then (2) a determination of whether, and to what extent, the "totality of circumstances" supports the award of enhanced damages in the exercise of the court's discretion. See Jurgens v. CBK, Ltd., 80 F.3d 1566 (Fed. Cir. 1996) (citing Read Corp. v. Portec, Inc., 970 F.2d 816, 826-27 (Fed. Cir. 1992), abrogated on other grounds, Markman v. Westview Instruments, Inc., 52 F.3d 967 (Fed. Cir. 1995) (en banc)). In Read, the Federal Circuit set out nine factors to be considered in assessing the appropriateness of an enhanced damages award, which include: (1) "whether the infringer deliberately copied the ideas or design of another;" (2) "whether the infringer, when he knew of the other's patent protection, investigated the scope of the patent and formed a good-faith belief that it was invalid or that it was not infringed;" (3) "the infringer's behavior as a party to the litigation;" (4) "defendant's size and financial condition;" (5) "closeness of the case;" (6) "duration of defendant's misconduct;" (7) "remedial action by the defendant;" (8) "defendant's motivation for harm;" and (9) "[w]hether defendant attempted to conceal its misconduct." Read, 970 F.2d at 827. Each of these factors applied to this case supports enhancement of damages.

1. Deliberate "Copying" of Applera's Products

Applera argues that MJ copied features of its PE 9600 model thermal cycler, namely the calculated control mode and heat transfer algorithm,² in order to induce existing Applera customers to switch to MJ thermal cyclers, and thereby to unlicensed performance of the patented PCR process. As Read explained, copying a patent holder's ideas or design "would encompass, for example, copying the commercial embodiment, not merely the elements of a patent claim." Read, 970 F.2d at 827 n. 7. The calculated control mode and heat transfer feature of the 9600 thermal cycler, however, is covered by the '610 patent, not the PCR process patents and the '493 patent that the jury found were willfully infringed. While "copying" may thus be a misnomer, MJ's conduct with regard to the PE 9600 cycler is relevant and appropriate to take into account as a measure of the nature of defendants' culpability for their inducement of infringement of the PCR process patents. Copying patented product features demonstrates the purposefulness with which defendants sought to attract PCR users as customers, by taking features they thought customers would want from Applera's '610 embodiment, the PE 9600 thermal cycler. Defendants thereby encouraged these customers to use their thermal cyclers in an

²While Applera also argues that MJ copied the heated lid feature of its PE 9600 thermal cycler, the jury's finding of no infringement of claims 160 and 161 of the '610 patent warrants rejection of this conclusion.

infringing manner.

The evidence at trial supports the conclusion that MJ copied the calculated control mode and heat transfer algorithm used the PE 9600 thermal cycler, and did so in order to facilitate the performance of PCR. Michael Nussbaum, who designed the algorithm for MJ, testified, through deposition transcript read into the trial record, that the algorithm he designed was the same as that described in claim 1 of the '610 patent, see Trial Tr. 1054:7-18, and that MJ aimed to mimic this algorithm, which was used in the PE 9600 machine:

- Q. Do you know who set the goal of mimicking the PE 9600 sample temperature calculation control?
- A. I assume it was some consensus between Michas, Hansen, the Finneys, some degree of my involvement.
- Q. Do you know why they were advocating mimicking the PE 9600 sample temperature calculation?
- A. Because it was widely used by many users.
- Q. So why is that a significant thing?
- A. Because if users had protocols that they had developed on their machines, we wanted to enable them to run protocols on the MJ machine.
- Q. Why?
- A. Why? So they could use our machine.

Trial Tr. at 1058:13-22.

Plaintiff's expert, Marcel Marguiles, also testified that the algorithm claimed in the '610 patent was the same as that used by MJ's machines. See Trial Tr. at 1240:7-11 (stating that MJ's algorithm "takes the formula which is claimed in the patent, rearranges things in such a way that it does look very different when you look at it, but in fact, it does exactly the same

thing."). While defendants' expert, Shariar Motakef, testified that the algorithm used in MJ's thermal cyclers differed from the algorithm in claim 1 of the '610 patent by a time difference of 50 milliseconds, see Trial Tr. at 2516:11-2517:4, he also testified that in his experiments with regard to the time shift, he neglected the difference because it was negligible. See 2518:1-18. Moreover, Dr. Motakef testified that he did not speak with Michael Nussbaum, who designed the sample temperature algorithm for MJ and who agreed with plaintiffs that the algorithm was the same as that appearing in claim 1. Accordingly, the Court concludes that defendants engaged in copying, in disregard of Applera's patent rights, aimed at encouraging the unlicensed performance of PCR.³

2. Good Faith Belief

The jury was instructed that "willful infringement is established where Applera has proved two things: (1) that MJ was aware of Applera's patents; and (2) that MJ had no reasonable good faith basis for concluding that it did not infringe Applera's patent, that is, MJ knew about the patent and did not

³The jury's finding that plaintiffs did not prove that defendants willfully infringed the '610 patent does not preclude this finding, because the algorithm feature of claim 1 is only one of many elements of the asserted claims of the '610 patent. Thus, although the jury concluded that defendants conduct, when viewed as a whole with respect to all elements of all the infringed claims was not willful, it does not necessarily follow that the jury did not credit Dr. Nussbaum's and Dr. Marguiles' testimony about copying the algorithm feature.

exercise due care to determine whether or not it was infringing the patent." The jury was also instructed to consider whether MJ "obtained and followed competent legal advice from an attorney after becoming aware of the PCR process or thermal cyclers patents and before beginning or continuing the infringing activities," and that a "good faith opinion means an opinion based on a reasonable examination of the facts and law relating to the validity and infringement issues, consistent with the standards and practices generally followed by competent lawyers. . . . Whether a legal opinion was legally correct or not is irrelevant so long as it was sufficiently thorough in the context of all the circumstances, to instill a reasonable belief in the infringer that the patent might reasonably be invalid, not infringed, or not enforceable." Jury Instructions [Doc. # 1077] at 47-48. Inherent in the jury's verdict, therefore, is its conclusion that defendants lacked a good faith basis for believing they were not infringing the PCR process patents and the '493 patent.

The evidence at trial supports the jury's verdict. Defendants conceded that they were on notice since at least 1992 that Applera claimed their acts were infringing. In October 1992, Applera wrote to defendants informing them that their actions in advertising their thermal cyclers for PCR use and preprogramming their thermal cyclers for PCR constituted inducement of infringement of the PCR process patents. See

Letter from John Warner, Director of Licensing, [Applera] to John Hansen, MJ Research, Inc., October 15, 1992 [PTX 811] ("[I]f . . . you continue to sell to unlicensed users, especially in the case of thermal cyclers that are preprogrammed to practice the unlicensed PCR process, your actions will constitute inducing infringement – and no notice in your advertisements will correct this."). In this letter, Applera quoted Sandusky Foundry & Machine Co. v. De Lavaud, 274 F. 608 (6th Cir. 1921), an early authority holding that "[w]here defendants manufacture a device capable of an infringing use and sell it with the intent that it shall be so used, they infringe the patent, even though their device is capable of a noninfringing use, and even though they go through the form of instructing that it shall be used in a noninfringing way."). In May 1994, when Applera set out to license suppliers through its Supplier Authorization Program, MJ sought an opinion from counsel about the applicability of Sandusky. In a June 3, 1994 letter responding to Michael Finney's questions, counsel wrote that "[m]odern cases state a rule consistent with the language quoted from Sandusky." Letter of Paul Killeen, Sherburne, Powers & Needham, P.C., to Michael Finney, June 3, 1994 [PTX 550] at 3. Counsel went on to state, however, that the "Sandusky Foundry case is beside the point because MJR's defense is not limited to saying, 'I told them not to do it.' To the contrary, MJR's defense is that its cycler is

not infringing because it is a 'staple' suitable for substantial non-infringing use." Id. at 4. Counsel drew only from the law of contributory infringement, and did not discuss the law of inducing infringement, which does not depend on whether or not the cycler could be deemed a "staple" item of commerce with substantial non-infringing use. Compare 35 U.S.C. § 271(b) (covering inducing infringement) with § 271(c) (covering contributory infringement). This omission is glaring, particularly since Applera's notice to defendants expressly accused them of inducement of infringement, not merely contributory infringement. As such, the letter does not meet the "minimum standards of competency" necessary for a defense of good faith reliance. See Jurgens v. CBK, Ltd., 80 F.3d 1566, 1571-73 (Fed. Cir. 1996) ("If infringers could rely on any opinion to defeat willful infringement, no matter how incompetent, insulation from increased damages would be complete."). Moreover, the letter reflects the advice of an interested party defending an already-established position rather than the advice of an impartial legal advisor making a good faith attempt to avoid infringing another's patent. It makes such strategic pronouncements as "we have enough ammunition to resist P.E.'s demands," and "I see no reason . . . why we cannot formulate a business approach to P.E., at this time, that reflects confidence in our position and suggests that a battle on these issues would

only hurt both sides." See Killeen Letter [PTX 550] at 3.

In response to plaintiff's motion to compel during this litigation, counsel for defendants stipulated that "MJ Research has not received any opinions of counsel regarding the PCR process patents-in-suit." Stipulation and Order, August 9, 1999 [PTX 2300]. Defendants later requested to introduce at trial evidence that they sought and obtained advice from MJ's legal counsel, Andrew Strenio. The Court excluded this evidence, "[g]iven defendants' untimely and incomplete disclosure of the substance of their communications with counsel or receipt of opinions of counsel regarding the PCR patents in suit (the '188, '195, and '202 patents) or their positions of patent unenforceability and misuse and antitrust violations related to plaintiffs' authorization programs for the patents-in-suit, the parties' stipulations, the clear scheduling orders entered in this case, and the absence of any good cause shown for defendants' failure to earlier waive its position of attorney-client privilege in regard to this subject matter." Order on Plaintiffs' Motion to Exclude Evidence or Argument by Defendants Based on Advice of Counsel Regarding the PCR Patents, Unenforceability, Patent Misuse, and Antitrust Issues, Feb. 11, 2004 [Doc. # 889].

Despite the Court's exclusion of this evidence at trial, defendants argue that the Court may consider it in assessing the

appropriateness of enhanced damages. While as a general matter a court may consider evidence not before the jury, see Advanced Cardiovascular Sys., Inc. v. Medtronic, Inc., 265 F.3d 1294, 1310-11 (Fed. Cir. 2001) (noting that, "at least in general, Read itself implicitly endorses this practice by including several factors that a jury is not in the best position to assess"), the prejudice from the lack of discovery on this issue counsels against its use here. Even if it were appropriate to consider the information relating to Mr. Strenio's advice, however, the documents fail to demonstrate that defendants relied in good faith on the advice of counsel. The Strenio letter is not a traditional opinion letter containing objective legal and factual analysis, but rather an advocacy letter submitted on behalf of MJ to the Federal Trade Commission as part of MJ's effort to prompt a Government antitrust investigation of Applera's licensing program.⁴ Mr. Strenio's letter to MJ confirming the subject of his firm's retention made clear that the firm intended to "to analyze, from an antitrust perspective, the activities of [Applera] that have harmed [MJ's] ability to sell cyclor machines manufactured by MJ Research, Inc.," in order to "develop a

⁴The Strenio letter argued that Applera's licensing program constituted an illegal tying practice, but did so without analysis of the legal tests for determining whether there are separate products, or the applicable standard for determining whether purchasers of the tying product were forced to buy the tied product.

presentation explaining the case for federal and/or state antitrust officials to begin an inquiry into [Applera's] behavior and, hopefully, commence a formal investigation." See Letter from Andrew Strenio to Michael Finney, December 14, 1994 [Doc. # 784, Ex. 26]. As Strenio's representation of defendants was aimed at a particular result – to instigate a federal antitrust investigation – it does not satisfy the requirements of a good faith legal opinion. In fact, although defendants have vigorously pursued their claims that Applera's patents are unenforceable because its licensing program constituted patent misuse, defendants have not pointed to any legal opinions from which this Court could conclude that MJ came to its position in good faith. This Court has found these claims to be without merit. See, e.g. Ruling on Plaintiff's Motion in Limine to Exclude MJ's Evidence and Arguments Claiming PCR Rights are Tied to Authorized Thermal Cyclers [Doc. # 874]; Rulings on Motion for Partial Summary Judgment on Patent Misuse of MJ Research, Inc. and Michael and John Finney; Plaintiffs' Cross Motion for Partial Summary Judgment on MJ's Patent Misuse Defense [Doc. # 1255].

Defendants also received a legal opinion regarding invalidity and infringement of the '493 patent. See Opinion Letter from A. Jason Mirabito, Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C. to Michael Finney, September 22, 1998 [PTX 1500]. Defendants' good faith reliance on the validity

opinion, however, is called into question by the fact that although the prior art references on which Mr. Mirabito relied in his invalidity opinion were those that MJ asserted against the '675 patent in re-examination, MJ did not seek re-examination of the '493 patent, and did not assert this prior art against the '493 patent at trial. Moreover, counsel's statement that "there may be issues of validity based upon a discrepancy of inventorship which will be borne out over time," id. at 4, is far from conclusive about the validity of the patent based on inventorship.

Further, Mr. Mirabito's opinion on noninfringement of the '493 patent was based on incorrect information that could only have been provided by MJ. In particular, counsel's opinion letter stated, "[a]s is presently understood, the thermocycler, when sold by MJ Research, is not programmed with a PCR protocol." Id. at 5. Prior to January 2001, however, MJ acknowledged that it pre-programmed its thermal cyclers with several PCR protocols. See Testimony of John Hansen, Trial Tr. at 945:15-20; Testimony of John Finney, Trial Tr. at 1498:2-15 (testifying that the PCR protocols were removed in January 2001). Finally, the opinion provided a only conclusory statement, without any citation to applicable legal authority, that MJ did not induce infringement because "[a]s understood . . . MJ Research also informs its customers that a license is needed for the use of the

thermocycler in performing PCR." Mirabito Opinion Letter [PTX 1500] at 5. As Applera had repeatedly informed MJ of its position that such license notices did not absolve MJ of liability for inducement of infringement, the absence of any legal analysis of the inducement issue in counsel's opinion is striking.

Accordingly, the Court concludes that defendants did not ever have a good faith basis for believing that their actions did not infringe the PCR process patents or the '493 patent, or that they had successful defenses to infringement.

3. Behavior as a Party to the Litigation

This has been a highly contentious, long, and hard fought lawsuit. As the trial date neared, however, defendants' strategy appeared in increasing measure to be one of avoidance, obfuscation and delay. After engaging in extensive motion practice on their invalidity and inequitable conduct defenses, defendants failed to present any evidence at the bench trial, which had been scheduled for this purpose. Three days prior to trial, defendants raised new grounds for their inequitable conduct and invalidity defenses based on prior art that had not previously been disclosed. Their initial submission of proposed findings of fact and conclusions of law on inequitable conduct contained no factual details and no citations to the record. Other efforts to introduce opinions of counsel that they had

previously stipulated did not exist or to have undisclosed experts testify, the reactive filing of motions for reconsideration, and the murky factual and legal support for some motions, highlight the opportunism of MJ's litigation strategy and may similarly be criticized.

After six years, hundreds of motions, and a month of trial, on the day closing arguments were to take place, MJ filed for bankruptcy in Nevada. This filing automatically stayed this litigation, and can only be viewed as a cynical effort to delay the trial and the jury's return of its verdict. The Bankruptcy Court granted Applera's motion for relief from the automatic stay, stating, "I have a difficult time believing that the potential for reorganization was discussed for the first time within the last forty-eight hours." See Telephonic Hearing, Partial Transcript of Proceedings before the Honorable Gregg W. Zive, United States Bankruptcy Judge, March 29, 2004 [Doc. # 1126, Ex. G].

4. Defendant's Size and Financial Condition

While MJ has argued that "any award of enhanced damages would be the equivalent of a corporate 'death sentence,'" Def. Mem. at 11, because its total profitability during the 10 year period of alleged infringement was approximately \$45 million, subsequent developments, including MJ's purchase by Bio-Rad and its withdrawal from bankruptcy proceedings, persuade the Court

that MJ's dire prediction is unsupported and an enhancement of damages will not endanger defendant's non-infringing business. In a 10-Q filing dated November 9, 2004, Bio-Rad disclosed its August 2004 purchase of MJ Geneworks, the parent company of MJ Research. See Reines Decl., Exh. B at 6-7 [Bio-Rad Form 10-Q, November 2004]. In this filing, Bio-Rad described MJ as worth \$90 million, but stated that it paid MJ's shareholders, Michael and John Finney, \$31 million for the purchase of the company because it assumed two liabilities: \$9 million in notes payable and capital leases, and a \$50 million litigation accrual. Id. at 7, 13. Thus, Bio-Rad set aside a sum of money to cover exposure in this case of up to \$50 million.

4. Closeness of the Case

On the issues of whether defendants willfully induced infringement of the PCR process patents and the '493 patent, this case was not close. Defendants did not contest that they were aware of the PCR process patents, as they had been accused by Applera of infringement as early as 1992, and Applera began to seek in earnest to license MJ in 1994.⁵ Applera's evidence at

⁵See Letter from John E. Warner, Director of Licensing, Perkin-Elmer Corp. to John Hansen, MJ Research, Inc., October 15, 1992 [PTX 811] (stating that "it is our position that any conduct on the part of MJ Research that induces infringement of the patents identified in my letter to you of June 15, 1992, renders MJ Research liable for patent infringement. As you know, the patents in question cover both the PCR process and cycle sequencing using Taq.").

trial showed that 96 percent of MJ's customers performed PCR in Applera's fields. See Testimony of Dr. Gerald Ford, Trial Tr. [Doc. # 1108] at 2198-2199 (testifying that study showed that 95.75% of all MJ Research thermal cyclers in the United States have been used to perform PCR in a Perkin-Elmer [Applera] field). Michael Finney testified in a deposition read into the record that he estimated that approximately 20% of its thermal cyclers were never used for PCR, demonstrating that MJ knew that a substantial proportion of their customers were performing PCR. MJ promoted this PCR use, advertising its equipment for PCR,⁶ providing manuals with instructions for programming thermal cyclers for PCR use,⁷ and providing technical support to assist their customers with questions about performing PCR on the MJ thermal cyclers.⁸ Until 2001, moreover, MJ's thermal cyclers contained preprogrammed PCR protocols. See Testimony of John Hansen, Trial Tr. at 945:15-20. In addition, MJ gave away free

⁶See, e.g. MJ Research Notebook, Summer 1997 [PTX 431] (advertisements for performing PCR on MJ thermal cyclers, appearing in the journals BioTechniques, Cell, and Nature Medicine). MJ's website also contained information about the performance of PCR.

⁷See Testimony of Michael Finney, Trial Tr. at 1819:8-15; Testimony of Robin Buell, Trial Tr. at 1005:3 - 1007:22 (explaining that manuals provided protocols that can be used to perform PCR).

⁸See, e.g. Procedure: CS-15 Finnzymes Sales 6.0, MJ Research, Mar. 18, 1998 [PTX 674]; Testimony of Robin Buell, Trial Tr. at 1000:11 - 1004:21.

PCR kits with the sale of some thermal cyclers, following up with these customers at later dates to both inquire whether the customers wanted another free PCR kit and to sell PCR kits. See Testimony of John Finney, Trial Tr. at 1520:23-1525:16.

Defendants' defenses to induced infringement of the process patents at trial were markedly unpersuasive. First, as the jury was instructed, MJ could induce infringement even if it warned about the risk of direct infringement if its material containing the warning nevertheless invited the infringing activities, and MJ's promotional materials did in fact encourage PCR use. Second, MJ's claimed reliance on end users obtaining a license lacked credibility, because MJ was aware that few of its customers obtained an end user license. John Finney acknowledged that approximately 400 MJ machines were licensed under the EAP, out of a total of about 65,000 MJ machines. See Trial Tr. at 1777:15-19.⁹ Robin Buell, who was in charge of customer support, stated that in a memorandum dated June 1998 that "[i]n spite of everything we are dealing with regarding PE and the stickers, the truth is most people don't bother to pay PE and get the sticker [i.e. end user license]." See [PTX 510]. There also was evidence that MJ discouraged people from getting licenses. See MJ Research Notebook, Autumn 1994 [PTX 422] (stating that "The

⁹See also Testimony of Michael Finney, Trial Tr. at 2385:12-15 (testifying that MJ manufactured around 65,000 thermal cyclers since 1994).

polymerase chain reaction (PCR) is a process covered by patents owned by Hoffman-La Roche. Users should obtain proper license – or use licensed reagents – to perform the reaction.”). In fact, at the time this advertisement appeared, Applera had introduced its Supplier Authorization Program and End User Authorization Program, making it clear to MJ that licensed reagents were not sufficient to avoid infringement. MJ also distributed an article providing instructions on how to perform the PCR technique of in-situ amplification, which stated that “there is a common understanding that federal courts have historically interpreted patent & antitrust law to provide a ‘research exemption’ to U.S. patents for research that has no commercial content. Should a reader wish to use the processes described for a remunerative or commercial application, we strongly urge that proper patent licenses be obtained.” See Omar Basagra, In-Situ Amplication & Hybridization [PTX 488]; Testimony of John Hansen, Trial Tr. at 955:15-23 (testifying that he sent out thousands of copies of the Basagra protocol at trade shows). In fact, “research” is one of the fields covered by Applera’s patent, and as this Court’s ruling on customer class exemptions noted, it has long been clear that a so-called “experimental use” defense exists only in “very limited” and “very narrow” form. Madey v. Duke Univ., 307 F.3d 1351, 1359-61 (Fed. Cir. 2002). See Ruling on Plaintiffs’ Motion in Limine to Exclude Evidence of Argument by Defendants Regarding

Customer Class Exemptions [Doc. # 973] at 3, 5 ("The proper focus is not whether uses are non-commercial or not-for-profit but rather whether they are in keeping with defendants' customers' legitimate business objectives, including educating [Human Genome] project participants, and increasing the university's or laboratory's status or ability to lure research grants, students, or researchers; but not solely for amusement, to satisfy idle curiosity, or for strictly philosophical inquiry."). Thus, in distributing an article suggesting that customers performing research did not need a license, defendants misinformed customers and encouraged infringement. Finally, Robin Buell testified that she did not discuss authorizations with customers unless they first raised it with her. See Trial Tr. at 1030:22 - 1031:17.

Applera's refusal to accept MJ's checks to purchase end user authorizations does not make this a close case, because Applera, as a patent holder, is entitled to flexibility in its licensing decisions. End user licenses would not license MJ as a supplier, and Applera made clear to MJ that it did not want MJ to act as its agent, and wished to deal with end users directly. MJ, moreover, did not openly endeavor to distribute end user licenses, listing itself, not the intended customer, as the end user in the licensing agreement.

Finally, MJ's reliance on new Federal Circuit authority does not affect the outcome of this case. In Knorr-Bremse Systeme

Fuer Nutzfahrzeuge GmbH v. Dana Corp., 383 F.3d 1337 (Fed. Cir. 2004) (en banc), the Federal Circuit held that "the failure to obtain an exculpatory opinion of counsel shall no longer provide an adverse inference or evidentiary presumption that such an opinion would have been unfavorable." Id. at 1346. Although plaintiffs' counsel pointed to the absence of a legal opinion letter on the PCR process patents during closing argument, see Trial Tr. at 2797:11-20, it was one factor of many called to the jury's attention. See Trial Tr. at 2752:15-2771:23; 2797:21-2800:23. In view of the overwhelming evidence of willful infringement supporting the jury's verdict, as discussed above, the Court concludes that this argument was not outcome determinative.¹⁰

5. Duration of Defendant's Misconduct

MJ's infringing activities lasted over a decade, as measured by the time when Applera introduced its Supplier Authorization Program, which was the agreed relevant time frame in this case,

¹⁰Defendants also point to the Federal Circuit's January 25, 2005 decision in Independent Ink, Inc. v. Illinois Tool Works, Inc., 396 F.3d 1342 (Fed. Cir. 2005), which emphasized the continued validity of early Supreme Court authority, such as Int'l Salt Co. v. United States, 332 U.S. 392 (1947), establishing the antitrust tying doctrine in the patent context. As this Court's decisions on MJ's antitrust counterclaims and patent misuse defenses recognized this earlier Supreme Court authority, but found the facts of this case distinguishable, the outcome here would not have differed.

and continued throughout this lawsuit.¹¹ MJ had long acknowledged the dependence of its business on PCR, as John Finney stated in August 1992 that "[w]e've ridden the wave of growth in PCR, but we haven't had any claim to the idea." See [PTX 1971]. Although this statement was made prior to the introduction of Applera's supplier licensing program and the time period at issue in this suit, the fact that MJ previously acknowledged its reliance on PCR is relevant to the degree of its willfulness in resisting Applera's license demands. The voluminous evidence introduced at trial supports the jury's verdict that defendants' infringement occurred over a significant period of time.

6. Remedial Action by the Defendant

Defendants took no remedial measures during the pendency of this litigation,¹² and opposed plaintiffs' post-verdict efforts to enjoin defendants' continuing infringement. Although the Bankruptcy Court had lifted the stay that automatically issued upon MJ's filing for bankruptcy to permit completion of the jury

¹¹The Court will not consider Applera's allegations of continued infringement subsequent to Bio-Rad's purchase of MJ. Although Bio-Rad is licensed by Applera, Applera has refused Bio-Rad's royalty payments on behalf of MJ. It is unnecessary to decide this dispute, which ultimately affects a non-party to this litigation, because its resolution does not impact this Court's view of the merits of enhancing damages.

¹²Although MJ removed the preprogrammed PCR protocols from its thermal cyclers in January 2001, this did not end the infringement.

trial, MJ's course of conduct before the Bankruptcy Court was to the effect of perpetuating its infringing activities by preventing Applera from seeking any post-trial injunctive relief in this case for conduct the jury had already found infringed. In opposing Applera's injunction motion in the Bankruptcy Court, MJ argued:

According to the Pre-Judgment Injunction motion, Applera desires to seek to obtain from the District Court a broad and ambiguous injunction that would, among other things, enjoin the Connecticut defendants from making, using, selling, or offering to sell the Debtor's principal product line, thermal cyclers, and related products that allegedly infringe or induce infringement of Applera's asserted intellectual property rights. . . . [A]s stated in the Finney Declaration, an estimated \$66.5 million in annual revenues, or 84% of the Debtor's annual revenues, would be lost if any such pre-judgment injunction were issued and enforced.

Debtor's Opposition to Applera Corporation's Amended Motion For Authorization to Commence and Prosecute Action for Injunctive Relief Against MJ Research [Doc. # 1126, Ex. B] at 4-5 (citing Finney Declaration, ¶ 4).

The absence of remedial efforts by MJ in the aftermath of the jury's verdict thus also counsels in favor of enhancement of Applera's damages award. The Court need not consider actions subsequent to Bio-Rad's purchase of MJ, or Applera's further allegations about new MJ thermal cycler products that are claimed to infringe, because these issues are beyond the scope of this suit, and resolution of these matters would not affect the

Court's decision on plaintiffs' motion.¹³

7. Defendants' Motivation for Harm

Applera argues that defendants are particularly culpable because they willfully engaged in infringing activities in order to exploit the competitive advantage they gained by refusing to pay license fees and thereby undersell their competitors and gain market share. Applera points to MJ's 1998 Strategic Growth Plan, which states:

It is estimated that without PE's strong arm tactics, MJ could take an additional 30-40% market share based on its superior product line. Thus, should MJ not prevail in its litigation with PE, the company is expected to more than make up for any required fees by taking market share. This is a no win lawsuit for PE and a win-win lawsuit for MJ.

See Strategic Growth Plan [PTX 814] at 3-4.

¹³Bio-Rad is undisputedly licensed, and has offered to make royalty payments on behalf of MJ pursuant to its license. While Applera has rejected this offer because Bio-Rad's license with Applera does not cover all of the claims of the patents-in-suit, and because defendants have not shown that Bio-Rad, not MJ, is the manufacturer and seller of the products, it is a sufficiently close question as to whether these actions by Bio-Rad may be viewed as remedial on behalf of MJ. It is not necessary for the Court to address this issue, however, because the Court concludes that these actions cannot mitigate in defendants' favor, as they occurred months after the jury's verdict and were by a non-party entity. Compare Intra Corp. v. Hamar Laser Instruments, Inc., 662 F.Supp. 1420, 1439 (E.D. Mich. 1987) (doubling rather than trebling damages because defendant "voluntarily ceased manufacture and sale of infringing systems during the pendency of this litigation . . ."), aff'd without opinion, 862 F.2d 320 (Fed. Cir. 1988), cert. denied, 490 U.S. 1021 (1989) (cited in Read, 970 F.2d 816 (Fed. Cir. 1992)). While it is Applera's position that these constitute a further aggravating factor, the other circumstances present in this case give the Court a sufficient basis on which to decide plaintiff's motion for enhanced damages.

Defendants dispute the significance of the 1998 Strategic Growth Plan, arguing that the Strategic Growth Plan merely reflects MJ's belief that it would succeed in the market place based on its superior products, even if it ultimately had to pay infringement damages to Applera or join the SAP. MJ argues that when read in context, the statement that MJ would take market share reflects MJ's expectation of what would occur after it joined the SAP. As MJ construes the sentence, "even if MJ loses the litigation and has to join the SAP, the increase in market share thereafter (from its superior products and without continuing harassment from Applera) would more than make up for the license fees it would then be paying. In other words, the document states a belief that MJ would significantly increase its market share as a SAP member, more than off-setting the cost of the license." Surreply Memorandum of Law in Opposition to Plaintiffs' Motion for Enhancement of Damages and For Attorney's Fees Based on Defendants' Willful Infringement [Doc. # 1287] at 4-5. The Court disagrees that this is a reasonable interpretation. While MJ's conviction that its products were superior to Applera's may have been genuine, the Strategic Growth Plan indicates that it aimed to increase its market share based on both its superior products, and its avoidance of Applera's

licensing fees.¹⁴ In context, the references to increasing MJ's market share indicate that this increase would occur during the period of time during which MJ refused to be licensed, i.e. "without PE's strong arm tactics," not after the conclusion of the litigation.

Other evidence supports the conclusion that MJ was motivated to avoid the licensing requirements in order to undersell its competitors and increase its profits and market share. For example, in an e-mail to Michael and John Finney from Michael Mortillaro discussing the sale of MJ thermal cyclers to Qualicon, Mortillaro states:

They are looking for the low \$4000 range for a PTC-1196 and authorization. I would like to suggest a 30% discount on the PTC-1196 (US\$3356.50) and they pay for the authorization at a straight cost of \$1000. . . . If we can convince them to drop the authorization requirement then we can offer the PTC-1196 at a lower discount such as 20% (\$3836).

E-mail from Michael Mortillaro, August 5, 1997 [PTX 523].

As this e-mail communication indicates, when customers requested end-user licenses, MJ was forced to discount more heavily to make

¹⁴MJ points out that during the period from 1988 to 1994, a period prior to the scope of this litigation, when Applera had not yet introduced its Supplier Authorization Program, MJ's market share grew from 0% in 1987 to about 27% of the thermal cycler market by 1994. MJ states that from 1994 through the early 2000s, MJ did not gain market share but only managed to maintain the share it had obtained in the early 1990s. See Beerbower Decl. Ex. 3. The goal of increasing market share is not what is at issue, nor is the issue whether MJ was ultimately successful in this goal. The issue for the Court is whether MJ was motivated to use an impermissible means – the avoidance of licensing payments – as one means to gain market share.

up for the cost of the license, but it was able to discount less while keeping ultimate prices lower if it could avoid the licensing requirements.

Defendants argue that their actions were not motivated by a desire to harm plaintiffs, but by a desire to compete fairly in the marketplace. See, e.g. Letter from John Hansen to J. Warner, June 19, 1992 [DTX 51] (stating that MJ was "determined to fight any effort to use the false threat of patent infringement in an endeavor to restrain free trade, and we ask only that competition in the marketplace be conducted in a more professional manner."); Letter from John Hansen to E. Daniell, August 20, 1996 [PTX 598] ("Our attorneys tell us with great certainty that it would be unlawful for us to vend these authorizations tied to the sale of a thermal cycler; rather, authorizations must be sold as separate items."). As the jury has found willful infringement, MJ's stated position that Applera made baseless accusations of patent infringement itself lacked a good faith basis. Moreover, this Court has found defendants' tying argument to be without merit. In deposition testimony, when defendants' expert, Almarin Phillips, was instructed to assume that Applera's patent covered the use of a thermal cycler to perform PCR (which is in fact the scope of Applera's patent), he agreed that Applera's licensing program "would not involve an [sic] a tying arrangement." See Deposition Testimony of Almarin Phillips, Oct. 20, 2000 [Doc. #

688, Ex. 1].

A patent gives its owner the right to exclude others and the right to extract royalties, and thus a patent holder indeed has certain advantages in the marketplace. This is an entirely lawful and appropriate means of valuing and rewarding the intellectual property. While defendants may resent the impact on their business, they are obliged to follow the law. The Court concludes that defendants were motivated by a desire to undersell competitors, not merely to protect the fairness of the marketplace.

9. Attempts to Conceal Infringement

The Court also finds that defendants made attempts to conceal their infringing activities. For example, although MJ advertised for PCR, as discussed above, there is evidence that MJ avoided publications that would be accessible to Applera. John Hansen wrote in an e-mail dated January 4, 1996, "I would advise against having it promoted for use in PCR in the San Jose Mercury News, because of the proximity of the paper's distribution to the offices of the ABI [Applera predecessor] authorities (unless this particular machine is one that has been "authorized")." See [PTX 2304]. MJ also acknowledged "disguising" its practice of bundling reagents with thermal cyclers. See E-mail from David Titus, April 13, 1998 [PTX 682] ("The connection with the cyclers and the reaction vessels, disguised as it is at present, is

definitely worth a lot."). MJ also rewrote its website to remove references to the factual significance of PCR and to emphasize instead the historical role of other techniques, such as cycle sequencing.¹⁵

MJ argues that some of the actions that Applera identifies as concealment – such as avoidance of the use of the phrase "PCR machine" and the removal of references to PCR on its website – were in fact efforts to avoid inducing infringement. The key fact, however, is that defendants did not refrain from promoting their thermal cyclers for PCR use, but rather took measures to avoid the outward appearance of such promotion despite continued inducement in actual interactions with customers. Further, despite defendants' efforts to revise history, the fact of the historical significance of PCR to the thermal cycler market was well-established at trial.¹⁶

¹⁵Compare MJ website as of November 11, 1996 [PTX 473] ("In 1988 . . . [t]he recent combination of the polymerase chain reaction with thermostable enzymes created an increased demand for thermal cycling equipment."), with MJ website as of March 2004 [PTX 2426] ("Demand for thermal-cycling instruments greatly increased in the late 1980's, driven at first by the popularity of new biochemical techniques, like thermal cycle-sequencing and other DNA amplification techniques."). Dr. Hunkpaillar testified, however, that prior to 1990 there were no publications about cycle sequencing. Trial Tr. at 347:14-348:1.

¹⁶It is not necessary to address Applera's argument that defendants attempted to shield MJ's assets from plaintiffs, because concealment of profitability is not a Read factor. Applera points to evidence that defendants' internal financial statements show that by November 2003, Michael and John Finney had withdrawn more than \$48 million of MJ's retained earnings,

When viewed as a whole, the circumstances surrounding the jury's willfulness finding all tend to be aggravating, and there is little that is ameliorative or mitigates in favor of defendants. Defendants' patent misuse and antitrust claims, which were denied in a series of summary judgment and in limine rulings, formed the basis of much of their defense to the infringement charges. While vigorously litigated, in this Court's view most of the issues were not close. All of the patent misuse and antitrust claims were decided in Applera's favor at the summary judgment or motion in limine stage, as none presented sufficient factual or legal issues for trial.

The evidence at trial revealed a degree of dismissiveness of Applera's patent rights and disrespect of the value the law places on protection of intellectual property that was

half of which was distributed after 1998, when this litigation began, and that these distributions comprised virtually all of MJ's earnings. See Annual Trial Balance Reports for MJ Research [PTX 2314] (Ex. D to Ehrlich Decl. at MJ-SUP 35631 (showing shareholder distributions of \$48,512,951.40); [PTX 1754] at MJ 8054378 ("Distrib. Earnings" earlier than 1998 totaling \$19.553 million); See Trial Tr. at 2559:9-10. Applera argues that these distributions contributed to MJ's filing for bankruptcy in an effort to delay payment of damages, and, in conjunction with efforts to avoid the personal liability of the Finneys, were an attempted means to prevent any collection of damages.

Because Michael and John Finney were the only two shareholders of MJ Research, Inc., the mere fact of the distributions need not be construed as evidence of impropriety. Moreover, because Michael and John Finney were named as individual defendants and ultimately were found personally liable, and jointly and severally liable for the total damages award, the distributions to the Finneys did not conceal assets.

exceptional. Enhanced damages are merited to punish this conduct and deter similar behavior, and to promote appropriate regard for patent rights. The Court doubles rather than trebles the damages in order to avoid endangering defendants' noninfringing business, in recognition of the relative size of defendants' business compared to the damage award, and the fact that substantial attorneys fees will be awarded in this case. Accordingly, the Court concludes that doubling the damages the jury awarded on the PCR process patents and '493 patents is warranted and adequate for these purposes under 35 U.S.C. § 284.

II. Attorneys' Fees

Pursuant to 35 U.S.C. § 285, "[t]he court in exceptional cases may award reasonable attorney fees to the prevailing party." "A determination whether to award attorney fees under 36 U.S.C. § 285 involves a two-step process. First, a district court must determine whether the prevailing party has proved by clear and convincing evidence that the case is exceptional. . . . Second, if the district court finds the case to be exceptional, it must then determine whether an award of attorney fees is appropriate." Forest Laboratories, Inc. v. Abbott Laboratories, 339 F.3d 1324, 1327-28 (Fed. Cir. 2003) (citations omitted). The Federal Circuit defines "exceptional" as those cases involving "inequitable conduct before the [Patent Office]; litigation misconduct; vexatious, unjustified, and otherwise bad faith

litigation; a frivolous suit or willful infringement." Id. at 1329 (citation and internal quotation marks omitted).

All of the circumstances discussed above support the conclusion that this case is "exceptional," and counsel in favor of award of reasonable attorneys' fees to plaintiffs in this case.

III. Conclusion

For the foregoing reasons, plaintiffs' Motion for Enhanced Damages and Attorneys' Fees Based on Defendants' Willful Infringement [Doc. # 1128] is GRANTED. Judgment shall be entered forthwith in favor of plaintiffs and against defendants in the total amount of \$35,442,000, and this case may be closed. In keeping with the jury's apportionment of each defendants' share of the total damages award,¹⁷ the jury's award with regard to the PCR Process Patents of \$12,474,000 against MJ, and \$693,000 each against Michael and John Finney; and the jury's award as to the '493 Patent of \$1,603,800 against MJ, and \$89,100 each against Michael and John Finney, are hereby doubled, resulting in PCR Process Patent damages of \$24,948,000 against MJ and \$1,386,000 against each of the Finneys; and '493 Patent damages of \$3,207,600 against MJ and \$178,200 against each of the Finneys. Adding the compensatory damages for infringement of the '675 and '610 patents, the damage award is \$31,897,800 against MJ,

¹⁷See Interpretation of Jury Verdict [Doc. # 1101].

\$1,772,100 against Michael Finney, and \$1,772,100 against John Finney. Each defendant is jointly and severally liable for the total \$35,442,000 award.

Plaintiffs shall submit their claim for reasonable attorney fees and costs and supporting documentation within 30 days. Defendants' response shall be filed 21 days thereafter. Upon a determination by the Court of the amount of fees and costs to be awarded, this judgment will be amended accordingly.

IT IS SO ORDERED.

/s/

Janet Bond Arterton, U.S.D.J.

Dated at New Haven, Connecticut, this 30th day of March, 2005.