

United States District Court
For the Northern District of California

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IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF CALIFORNIA

BOSTON SCIENTIFIC CORP., *et al.*,

No. C 02-00790 SI

Plaintiffs,

**ORDER DETERMINING REASONABLE
RATE FOR ONGOING ROYALTY**

v.

JOHNSON & JOHNSON and CORDIS CORP.,

Defendants.

CORDIS CORP.,

Counterclaim-Plaintiff,

v.

BOSTON SCIENTIFIC CORP., *et al.*,

Counterclaim-Defendants.

On February 2, 2009, the Court held an evidentiary hearing on a reasonable rate for the ongoing royalty to be awarded to counterclaim-plaintiff. Having considered the papers submitted and the testimony presented at the evidentiary hearing, and for good cause shown, the Court rules as follows.

BACKGROUND

In 2002, plaintiffs Boston Scientific Corporation, Boston Scientific Scimed, Inc., Scimed Life Systems, Inc., and Schneider (Europe) GmbH (collectively “BSC”) brought suit against defendants Johnson & Johnson and Cordis Corporation (collectively “Cordis”) for patent infringement. A jury trial was held from October 9, 2007 to October 31, 2007. The jury found for Cordis on its invalidity

1 contention that BSC did not reduce the invention of the Kastenhofer patents to practice in January 1992
2 and that Christine Byam was not correctly named as a joint inventor of the Kastenhofer patents. The
3 jury also found that BSC infringed Claim 7 of the Fontirroche patent under the doctrine of equivalents.
4 The question of damages for BSC's infringement of the Fontirroche patent was not submitted to the jury
5 because Cordis inexplicably chose not to call its damages expert and therefore failed to put on evidence
6 regarding a reasonable royalty rate. *See* Feb. 19, 2008 Order Re: Various Post-Trial Motions, at 1-3
7 ("Post-Trial Order"). [Docket No. 844]

8 After the trial, Cordis sought a judgment granting Cordis retrospective damages at a 2% royalty
9 rate, plus interest, and prospective damages at a 4% royalty rate. BSC opposed the motion for a 2%
10 royalty rate, arguing that Cordis made a tactical decision not to produce any damage evidence to the jury
11 and that an award of damages by the Court would therefore violate BSC's Seventh Amendment right
12 to a jury trial. On February 19, 2008, this Court held, *inter alia*, that it could not award damages to
13 Cordis without violating BSC's Seventh Amendment right. *See* Post-Trial Order at *21. The Court also
14 found, however, that awarding Cordis equitable relief in the form of an injunction or an ongoing royalty
15 would not infringe BSC's right to a jury trial. *See id.* The Court allowed the parties 60 days to negotiate
16 a license or for BSC to cease its infringement of the Fontirroche patent. The parties were unable to
17 negotiate a license and BSC continued to infringe the Fontirroche patent.

18 On October 3, 2008, the Court heard oral argument on Cordis' motion for equitable relief. In
19 an Order issued November 25, 2008, the Court held that under *Paice, LLC v. Toyota Motor Corp.* 504
20 F.3d 1293 (Fed. Cir. 2007), a trial court may, after an evidentiary hearing, determine the rate of an
21 ongoing royalty to be paid by an infringing party. Nov. 25, 2008 Order Re: Counter-Claim Pl.'s Mot.
22 for Equitable Relief at *5. [Docket No. 875] Noting that the main point of contention between the
23 parties' experts appeared to be whether the date of the hypothetical negotiation should be 1998 (the date
24 of the first infringement) or 2007 (the date of the jury's verdict), the Court directed the parties to assume
25 that they had negotiated a license on October 31, 2007, the date the jury returned a special verdict in
26 favor of Cordis. *Id.* at *7.

27 The Court held a two-hour evidentiary hearing on February 2, 2009. The parties elected to put
28 on one witness each. Lawrence Wu, Ph.D., opined for Cordis that in a hypothetical negotiation, Cordis

1 would accept a royalty rate between 5.1% and 14.8% and that the parties would negotiate an ongoing
2 royalty rate of 6%. Raymond Sims testified for BSC that the parties would negotiate within a range of
3 0.07% to 14.84% and that they would arrive at 0.5% as the rate for an ongoing royalty.¹ Tr. 73:6
4

5 DISCUSSION

6 1. The Effect of a Jury Verdict on the Ongoing Royalty Rate

7 A. Evidence taken at evidentiary hearing

8 *Paice* contemplates an evidentiary hearing in which the parties introduce evidence “to account
9 for additional economic factors” that might arise from the imposition of an ongoing royalty. 504 F.3d
10 at 1315. As it happened, much of the evidentiary hearing in this case concerned the expert witnesses’
11 disagreement on a legal issue: the effect that a jury finding of liability should have on the royalty rate.

12 Cordis’ witness, Dr. Wu, assumed that the jury verdict in Cordis’ favor would have a significant
13 effect on the royalty rate. Dr. Wu testified that for the purpose of his analysis, he had assumed that after
14 the jury’s decision, BSC would have either taken a license or stopped selling the infringing product.
15 *See* Tr. 22:19-23:3. He conceded that this assumption was contrary to fact because BSC and Cordis
16 have repeatedly litigated patent infringements (most recently in an ongoing case in Delaware) but to his
17 knowledge, the infringing party has never taken its product off the market after a finding of liability.
18 *See* Tr. 25:2-20. Dr. Wu acknowledged that BSC continues to sell the products found to be infringing
19 in this case, and that none of the two dozen analysts whose reports he had reviewed predicted that BSC
20 would experience any interruption to its sales as a result of the jury verdict. *See* Tr. 28:16-19; 29:8-17.

21 Dr. Wu nonetheless assumed that BSC would have taken its infringing product off the market
22 after the jury verdict in this case. To assume otherwise, he contended, would defeat the purpose of
23 engaging in the “thought experiment” of determining the outcome of a successful license negotiation.
24

25 ¹ In his declaration, which was submitted as an exhibit at the evidentiary hearing, Mr. Sims
26 claimed that if the date of the hypothetical negotiation were October of 2007, a reasonable royalty rate
27 would be 1.5%, based on the assumption that Cordis would be able to force BSC’s infringing product
28 off the market, creating a “hold up effect.” *See* Evidentiary Hearing, BSC ex. 2 (“PX 2”) ¶ 103. In his
oral testimony, Mr. Sims seemed to retreat from this conclusion, opining that based on the parties’ prior
dealings, it was a “bad assumption” to assume that Cordis would force BSC’s infringing product off the
market. Tr. 78:14.

1 As Dr. Wu put it:

2 The idea is to determine what a royalty would be if we had a willing licensor and a
3 willing licensee, that's the purpose. It's not a reflection of what actually has happened.
4 It is what would have happened had they . . . negotiated and come up with a royalty as
5 if they wanted to . . . reach agreement to that license. If you're going to go ahead and
6 assume that a party can go ahead and sell a product without taking a license, then there's
7 no point in having a negotiation.

8 *See* Tr. 26:5-16.

9 Mr. Sims, testifying for BSC, took a different tack. He opined that, had the parties attempted
10 to negotiate a license after the jury verdict, they would have assumed that BSC would have continued
11 to sell its infringing product:

12 Boston Scientific would say to Cordis, 'Look, the expectation is we won't be off the
13 market, we'll continue to sell . . . pending an appeal, during that time we could design
14 around and so that would limit the impact [of the adverse jury finding] on us. However,
15 we're willing to negotiate a license and pay you going forward. We won't design
16 around, we'll take a license and we'll pay you.' So they would negotiate a license to pay
17 on that basis.

18 *See* Tr. 64:22-65:8. Mr. Sims also took into account the parties' prior dealings. He assumed that during
19 the hypothetical negotiation, the parties would weigh the fact that "in this industry, the stent industry,
20 there has not been an injunction and they have both agreed to continue to allow the other party to sell
21 the products." *See* Tr. 66:3-7. According to Mr. Sims, the parties would have assumed that the same
22 pattern of behavior would apply in this case. *See id.*

23 Mr. Sims added another factor to the mix by considering that at the time of the jury verdict, the
24 parties would have been aware of the fact that they are also engaged in litigation over related patents
25 in Delaware. According to Mr. Sims, Cordis would have known during the negotiation that if it had
26 threatened to enjoin BSC's use of its infringing product, BSC would have retaliated by seeking an
27 injunction against Cordis in the Delaware action. *See* Tr. 66:15-25. This end game would have been
28 much harder on Cordis than on BSC, Mr. Sims testified, because BSC could have introduced an
alternative product, but Cordis' product would have been off the market entirely until an appellate
decision in Cordis' favor. *See* Tr. 67:4-16.

In sum, Cordis' expert assumed that the jury's finding of liability strengthens the bargaining
position of the party whose product was found to be infringed, while BSC's expert assumed that the jury
verdict would not affect the relationship of the parties in this case and is therefore not a factor that

1 warrants consideration in the Court’s determination of appropriate injunctive relief. The parties did not
2 appear to dispute that BSC’s view is grounded in reality; Cordis’ position is simply that in order to carry
3 out the analysis required by the hypothetical negotiation, one must assume that a jury verdict prevents
4 future infringement.

5
6 **B. The expert witnesses should have assumed that the jury finding of liability would
7 have allowed Cordis to force BSC’s infringing product off the market**

8 BSC effectively asks the Court to assume that a jury verdict in a patent case has no meaning.
9 The Court will not do this. Over the course of a three-week trial, the jurors had to learn about an
10 unfamiliar technology and listen to evidence on the complicated relationships between the parties and
11 their patents. They deliberated and came to a conclusion about infringement. We must assume that the
12 jury’s finding means something.² *Accord Amado v. Microsoft Corp.*, 517 F.3d 1353, 1362 (Fed. Cir.
13 2008) (“When a district court concludes that an injunction is warranted, but is persuaded to stay the
14 injunction pending an appeal, the assessment of damages for infringements taking place after the
15 injunction should take into account the change in the parties’ bargaining positions, and the resulting
16 change in economic circumstances, resulting from the determination of liability . . .”).

17 The authorities cited by BSC do not persuade the Court otherwise. On remand from the Federal
18 Circuit, the trial court in *Amado* weighed various factors to determine “the effect that the *finding of*
19 *liability* had on the parties’ bargaining stances and economic positions, as well as the evidence and
20 arguments found material to the stay.” *Amado v. Microsoft Corp.*, No. SA CV 03-342 at *8, Order
21 Resolving Remaining Issues from Federal Circuit Remand (C.D. Cal. Dec. 4 2008) (emphasis in
22 original). The trial court weighed the likelihood of success on appeal, the time and cost of eliminating

23 ² To proceed from a different set of assumptions would make the analysis impossibly
24 complicated. *See Cummins-Allison Corp. v. SBM Co., Ltd.*, 584 F. Supp. 2d 916, 918 (E.D. Tex. 2008)
25 (“The problem with ignoring or overruling *Georgia-Pacific* and basing the royalty rate calculation
26 entirely on a ‘real world’ view of the hypothetical negotiation or future damages is that the damages
27 expert should then, as real world lawyers and business owners would do, also consider the relative
28 strength of the infringement and invalidity cases, current trends of patent law, the merits of the parties’
lawyers, their perceived influence with judges, and even factors such as their willingness to engage in
abusive attempts to spend opponents into bankruptcy. In effect, economists and accountants would
render opinions on the merits of the case and the probable prevailing party. Requiring them to base their
conclusions on common, fixed assumptions may seem artificial, but courts have adopted the
hypothetical negotiation technique for many years in cases involving the acquisition of property.”).

1 infringement, and the fact that the plaintiff's source of profits from the patent³ was from the defendant's
2 use of the infringing device. The court also considered the factors that were relevant when it granted
3 a permanent injunction and found that they weighed in favor of the defendant. On balance, the court
4 concluded that the plaintiff's bargaining position was improved due to the finding of infringement, but
5 that this advantage was "substantially limited" by other factors. *Id.* at *17. Thus, the *Amado* trial
6 court's decision does not support BSC's contention that this Court should assume that the jury finding
7 of liability in this case had no effect on the parties' bargaining positions.

8 On remand, the trial court in *Amado* also concluded that it should not apply the *Georgia-Pacific*
9 factors when determining a post-infringement royalty rate. The court concluded that if it did so, it
10 would "run[] the risk of skewing the analysis towards a pre-judgment framework," in contravention of
11 the Federal Circuit's mandate. *Id.* Three opinions from the Eastern District of Texas (also cited by
12 BSC) reached a different conclusion on the applicability of the *Georgia-Pacific* factors to post-verdict
13 royalties. In each of the three cases, the courts assumed that the jury's finding of liability did not affect
14 the applicability of the *Georgia-Pacific* factors.

15 In *Ariba, Inc. v. Emptoris, Inc.*, the court reasoned that expert testimony on the hypothetical
16 negotiation at the time of infringement (i.e. pre-verdict) is relevant to the future royalty rate because
17 experts assume findings of validity and infringement when analyzing the hypothetical negotiation. 567
18 F. Supp. 2d 914, 918 (E.D. Tex. 2008) (Clark, J.). It would therefore be "logically inconsistent" for
19 experts' analysis to change "when those assumptions are replaced by jury findings of the same facts."
20 *Id. Accord Cummins-Allison Corp. v. SBM Co., Ltd.*, 584 F. Supp. 2d 916, 918 (E.D. Tex. 2008) (Clark,
21 J.) ("[A] jury finding of infringement and no invalidity does not change any logically consistent
22 analysis; rather, it merely confirms the original assumption of those facts."). The court in *Orion IP, LLC*
23 *v. Mercedes-Benz USA, LLC*, No. CV 05-322 at *9 (E.D. Tex. Mar. 28, 2008) found that the analysis
24 of a reasonable rate of royalty pre-verdict based on the *Georgia-Pacific* factors applied to the royalty
25 rate for post-verdict infringement.

26 This Court finds the reasoning of the trial court in *Amado* to be more persuasive. The Federal
27

28 ³ The defendant in *Amado* was found to have infringed the plaintiff's patent.

1 Circuit found that trial courts should not rely on jury verdicts on reasonable royalties for past
2 infringement because of the “fundamental difference” between pre- and post-verdict damages. 517 F.3d
3 at 1361. Accordingly, the Court concludes that it must assume that the jury finding of liability in this
4 case would have strengthened Cordis’ bargaining position had the parties negotiated a license after the
5 jury verdict. This strengthened bargaining position would have resulted from the parties’ knowledge
6 that Cordis could have forced BSC’s infringing product off the market for a limited period of time
7 (creating what the parties refer to as a hold up effect). Although the trial court in *Amado* abandoned the
8 *Georgia-Pacific* factors in its analysis on remand, both experts in this case have framed their analysis
9 in terms of those factors. The Court will therefore also use the *Georgia-Pacific* factors but will consider
10 whether certain factors should be weighed differently in the context of post-verdict royalties.

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12 **2. Analysis of the *Georgia-Pacific* Factors**

13
14 **A. Factor 15: The hypothetical negotiation**

15 The fifteenth *Georgia-Pacific* factor contemplates a hypothetical negotiation between a willing
16 licensor and a willing licensee. Dr. Wu opined for Cordis that the parties would negotiate within a range
17 of 5.1% and 14.8%. Mr. Sims challenged the assumptions that Dr. Wu made in arriving at the lower
18 end at that range and claimed that a more accurate minimum royalty would be 0.07%. First, Mr. Sims
19 cites deposition testimony of Cordis witnesses indicating that Cordis had chronic difficulties meeting
20 market demand for its Cypher stent (the product that Cordis would have used to replace BSC’s market
21 share). PX 2 ¶ 52. Dr. Wu responds that as of March of 2004, Cordis was able to achieve sales of close
22 to 65,000 Cypher stents per month. He therefore assumes that Cordis would be able to increase its sales
23 to 60,000 per month after the jury verdict. Evidentiary Hearing, Cordis ex. 2403 (“DX”) ¶ 79. The
24 Court finds that Dr. Wu’s contention that in October of 2007, Cordis would have had the capacity to
25 achieve the same levels of sales as in March of 2004 is credible.

26 Second, Mr. Sims contends in his declaration that Cordis would not have been able to sell its
27 Cypher stent as a substitute for BSC’s infringing product because Cordis’ products have been found to
28 infringe BSC patents. PX 2 ¶ 56. With this argument, BSC returns to the issue that was the focus of

1 the evidentiary hearing. Mr. Sim's analysis asks the Court to assume that the jury finding of liability
2 would have no effect on the parties' relative bargaining positions because in reality, the parties would
3 have recognized that if Cordis had forced BSC's product off the market, BSC would have retaliated with
4 respect to the Cordis patents that have been found in other litigation to infringe BSC products. As
5 discussed above, the Court rejects this argument. For the purposes of this analysis, the Court assumes
6 that the jury's decision would have led the parties to conclude that Cordis had the option of preventing
7 BSC from selling its infringing product.

8 Finally, Mr. Sims contends that Dr. Wu's minimum royalty is overstated because there is some
9 uncertainty as to whether BSC's new drug eluting stent delivery system, the Promus, infringes Cordis'
10 patent. *See* PX 2 ¶ 60, DX 2402 ¶ 16. Dr. Wu took this uncertainty into account in his analysis,
11 however, and considered alternate scenarios depending on whether the Promus was found to infringe.
12 His solution was to average the resulting minimum royalties. DX 2402 ¶ 43. The Court finds that Dr.
13 Wu's method was a reasonable way to account for how the uncertainty over the Promus could have
14 affected the parties' negotiations.

15 In sum, Mr. Sims' testimony does not cause the Court to adjust Dr. Wu's assessment of the range
16 within which the parties would negotiate. The Court will therefore assume that a reasonable royalty is
17 somewhere within the range of 5.1% and 14.8%. We now turn to the other relevant *Georgia-*
18 *Pacific* factors to arrive at a royalty rate within that range.

19
20 **B. Factor 1: Royalties received by the patentee for licensing of the patent in suit**

21 The first factor considers whether royalties received by Cordis for licensing of the patent in suit
22 provide or tend to prove an established royalty. Mr. Sims analyzed the 50 licenses produced in litigation
23 by Cordis. Ten of these licenses related to catheter technology and had royalties ranging from 0.5% to
24 5.0%. PX 2 ¶¶ 66-67. Dr. Wu challenges Mr. Sims' conclusion that this range supports a minimum
25 royalty of 1.5%. He contends that these licenses were negotiated before a finding of infringement and
26 are therefore artificially low. DX 2432 ¶ 99. Assuming the change in conditions after a jury verdict,
27 this factor weighs in favor of a royalty rate at the higher end of the 0.5%-5.0% range.
28

1 **C. Factor 2: Rates paid by the licensee for the use of other patents**

2 In this factor, the Court considers the rates paid or received by BSC for the use of patents
3 comparable to the patent in suit. Mr. Sims analyzed 41 licenses produced by BSC. According to Mr.
4 Sims, eight of these agreements relate to catheter technology and fall within a range of 3.7% to 4.6%.
5 PX 2 ¶ 71. Dr. Wu responds that these rates are artificially low because (1) in some agreements, BSC
6 also agreed to make lump sum payments to the patent holder, (2) rates negotiated after a finding of
7 infringement would be higher than those negotiated in the absence of a jury verdict, and (3) BSC’s
8 licenses have been as high at 6%. DX 2432 ¶¶ 99-101. The Court agrees with Mr. Sims that the
9 relevant licenses for our purposes are those that pertain to catheter technology. In addition, even if these
10 licenses are artificially low, they do not support a royalty rate in this case above the lower end of the
11 5.1% -14.8% range.

12
13 **D. Factor 12: Portion of profits or of selling price in the particular business**

14 Here, the inquiry is whether there is a customary royalty rate for analogous inventions in this
15 industry. The parties agree that there is no customary royalty rate in this industry. In the course of
16 litigation, however, the parties produced licenses for related technologies. Mr. Sims contends that the
17 relevant licenses are for “catheter technology related to the slipperiness of the catheter.” PX 2 ¶ 92.
18 According to Mr. Sims, the range for those royalty rates is 2% to 6%. *Id.* The Court agrees with Mr.
19 Sims that the licenses he singles out are the most relevant for present purposes. Even if, as described
20 above, Dr. Wu is correct that licenses negotiated in the absence of a jury verdict are artificially low, the
21 evidence available here does not support a rate above the lower end of the 5.1%-14.8% range.

22
23 **E. Factor 4: Licensor’s established policy to maintain his patent monopoly**

24 This factor considers whether Cordis has a fixed policy or practice of not licensing its patents
25 to competitors. Mr. Sims cites trial testimony that Cordis has licensed technology to competitors “[a]t
26 least five or six times” in the past. PX 2 ¶ 73. According to Mr. Sims, this evidence is indicative of
27 Cordis’ willingness to license its patents and supports placing the royalty rate at the lower end of the
28 applicable range. The Court agrees.

1 **F. Factor 5: The commercial relationship between licensor and licensee**

2 Here, the relevant factors are whether the parties are competitors in the same territory and line
3 of business, or whether they are inventor and promoter. It is undisputed that the parties are direct
4 competitors in the drug-eluting stent market. Dr. Wu contends that this factor supports a higher rate
5 because a patent owner is more likely to extract a greater royalty from a direct competitor in order to
6 account for lost sales and profits. DX 2402 ¶ 51. Mr. Sims does not dispute this contention.

7
8 **G. Factors 8 and 9: The established profitability of the product made under the patent
9 and the marginal utility of the patented invention over the old modes**

10 The relevant question here is the degree to which the patent in suit accounts for the commercial
11 success of Cordis products. Mr. Sims cites trial testimony indicating that cardiologists buy Cordis'
12 stents and delivery systems for the stent technology, not the balloon catheter. PX 2 ¶ 77. In addition,
13 Cordis' damages expert concluded in her report that the patent in suit did not contribute to the popularity
14 of these products. *Id.* Mr. Sims also cites trial testimony suggesting that the design features of the
15 patent in suit play a "secondary rule" in the infringing products. *Id.* ¶¶ 79-80. Mr. Sims contends that
16 this evidence supports a lower royalty rate for Cordis' patent. The Court agrees.

17
18 **H. Factor 13: The portion of realizable profit that should be credited to the invention
19 as distinguished from non-patented elements, the manufacturing process, business
20 risks, or significant features added by the infringer**

21 Finally, this factor considers how much profit is due to the catheter portion of the accused
22 products. Mr. Sims cites trial testimony that the "majority" of the value of a stent delivery system is
23 derived from the stent, not the catheter. PX 2 ¶¶ 93-99. Mr. Sims also cites deposition testimony that
24 Dr. Wu did not assess the degree to which the patent in suit contributes to the value of accused stent
25 delivery systems. *Id.* ¶ 95. The Court therefore agrees with Mr. Sims that this factor weighs in favor
26 of a royalty rate at the low end of the applicable range.

27 **I. A reasonable royalty rate is 5.1%**

28 In light of the foregoing discussion, the Court finds that, on balance, the relevant *Georgia-*

1 *Pacific* factors support a royalty rate at the low end of the 5.1% to 14.8% range. Dr. Wu concluded that
2 a reasonable rate is 6%. Having considered the *Georgia-Pacific* factors, however, the Court finds that
3 several factors weigh in favor of a rate below Dr. Wu's projection. Accordingly, the Court finds that
4 a reasonable royalty rate is 5.1% of sales of infringing BSC catheters sold alone or as part of a stent
5 delivery system.

6 It appears that this decision resolves all remaining issues in this case. The Court invites the
7 parties to submit a joint form of order by April 17, 2009.

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9 **IT IS SO ORDERED.**

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11 Dated: April 19, 2009



SUSAN ILLSTON
United States District Judge

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