

I. BACKGROUND

Plaintiffs NNCrystal US Corporation and the Board of Trustees of the University of Arkansas (collectively, “Plaintiffs”) assert U.S. Patent No. 7,105,051 (the “’051 Patent”) against Defendant Nanosys, Inc. The ’051 Patent covers methods for synthesizing nanocrystals. (D.I. 199 at 3).

Defendant manufactures thirteen different types of quantum dots that are accused of infringing the ’051 Patent. (D.I. 199 at 4; D.I. 211 at 8; D.I. 213 at 28). Quantum dots are comprised of a “core” that is surrounded by a “shell.” (D.I. 199 at 4; D.I. 213 at 28). For all but two of the accused products, just the shells are accused of being produced by Plaintiffs’ claimed method. (D.I. 199 at 4; D.I. 213 at 28).

II. LEGAL STANDARD

Federal Rule of Evidence 702 sets out the requirements for expert witness testimony and states:

A witness who is qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion or otherwise if: (a) the expert’s scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue; (b) the testimony is based on sufficient facts or data; (c) the testimony is the product of reliable principles and methods; and (d) the expert has reliably applied the principles and methods to the facts of the case.

Fed. R. Evid. 702.³ The Third Circuit has explained:

[T]he district court acts as a gatekeeper, preventing opinion testimony that does not meet the requirements of qualification, reliability and fit from reaching the jury. *See Daubert* (“Faced with a proffer of expert scientific testimony, then, the trial judge must determine at the outset, pursuant to Rule 104(a) [of the Federal Rules of Evidence] whether the expert is proposing to testify to (1)

³ The Rule is on schedule to be amended in December 2023.

scientific knowledge that (2) will assist the trier of fact to understand or determine a fact in issue.”).

Schneider ex rel. Estate of Schneider v. Fried, 320 F.3d 396, 404–05 (3d Cir. 2003) (footnote and internal citations omitted).⁴ Qualification examines the expert’s specialized knowledge, reliability examines the grounds for the expert’s opinion, and fit examines whether the testimony is relevant and will “assist the trier of fact.” *Id.* at 404.

III. DISCUSSION

A. Defendant’s Motion to Exclude Expert Testimony

Defendant moves to exclude the opinion of Plaintiff’s damages expert, Mr. W. Todd. Schoettelkotte, on two grounds. First, Defendant argues that Mr. Schoettelkotte failed to apportion his reasonable royalty calculation. (D.I. 199 at 18, 20-23; D.I. 221 at 10-15). Second, Defendant argues that Mr. Schoettelkotte erroneously included non-infringing activities in his royalty base for estimating reasonable royalty damages. (D.I. 199 at 18-19).

1. Failure to Apportion

Mr. Schoettelkotte determined that a reasonable royalty would be a rate of 5% applied to Defendant’s sales of all the accused products. (D.I. 199 at 20; D.I. 213 at 36).

For most of the accused products, only the shells are alleged to be manufactured using an infringing process, not the cores. (D.I. 199 at 4; D.I. 213 at 28). Defendant argues that Mr. Schoettelkotte’s testimony should be excluded because his proposed reasonable royalty does not apportion value to the non-infringing cores (D.I. 199 at 5). To the extent Mr. Schoettelkotte’s opinions rely on analyzing comparable licenses, Defendant contends that Mr. Schoettelkotte has

⁴ The Court of Appeals wrote under an earlier version of Rule 702, but the subsequent amendments to it were not intended to make any substantive change.

not demonstrated how those licensing agreements contain “built-in apportionment” or how those licenses are sufficiently comparable such that further apportionment is not required. (D.I. 221 at 11-15).

Plaintiffs counter that Mr. Schoettelkotte properly apportioned because he “relied on comparable licenses that contained ‘built-in apportionment,’ including licenses to the ’051 patent and accounted for the value of any non-infringing features as part of his analysis.” (D.I. 213 at 34). Plaintiffs cite to *Pavo Sols. LLC v. Kingston Tech. Co., Inc.*, for the proposition that using a “sufficiently comparable license” to determine the royalty can obviate the need for further apportionment because the license may have “built-in apportionment.” 35 F.4th 1367, 1380 (Fed. Cir. 2022). Plaintiffs further contend that Mr. Schoettelkotte’s testimony should not be excluded because he conducted a *Georgia-Pacific* analysis using comparable licenses, which can be used to apportion the royalty rate. (D.I. 213 at 36 (citing *Exmark Mfg. Co. Inc. v. Briggs & Stratton Power Prod. Grp., LLC*, 879 F.3d 1332, 1348-49 (Fed. Cir. 2018))).

“[T]he ultimate reasonable royalty award must be based on the incremental value that the patented invention adds to the end product.” *Ericsson, Inc. v. D-Link Sys., Inc.*, 773 F.3d 1201, 1226 (Fed. Cir. 2014). The Federal Circuit has instructed that district courts, as gatekeepers, should “ensure that only theories comports with settled principles of apportionment [are] allowed to reach the jury.” *VirnetX, Inc. v. Cisco Sys.*, 767 F.3d 1308, 1328 (Fed. Cir. 2014).

I find Mr. Schoettelkotte’s testimony should be excluded. Mr. Schoettelkotte asserts that the comparable licenses he analyzed had “built-in apportionment” (D.I. 214-1, Ex. I, p. 49, ¶ 122 (256 of 370)), but he does not explain how he arrived at that conclusion or cite to provisions of the licenses for support. “Built-in apportionment effectively assumes that the negotiators of a comparable license settled on a royalty rate and royalty base combination embodying the value of

the asserted patent.” *Vectura Ltd. v. Glaxosmithkline LLC*, 981 F.3d 1030, 1041 (Fed. Cir. 2020). Mr. Schoettelkotte has not demonstrated how that assumption applies here.

Even if the licenses had built-in apportionment, Mr. Schoettelkotte has not explained how the licenses he analyzed are “sufficiently comparable” such that further apportionment would not be necessary. *See Omega Pats., LLC v. CalAmp Corp.*, 13 F.4th 1361, 1377 (Fed. Cir. 2021). The licenses Mr. Schoettelkotte relies on included a broader portfolio of intellectual property or technology rights, than would be present in a hypothetical negotiation here. (D.I. 221 at 11 (citing D.I. 200, Ex. 18 at NNC-00000024-28)). Neither Mr. Schoettelkotte nor Plaintiffs provide support for the assertion the royalty rates in these licenses specifically embody the value of the ’051 Patent (or similar technology) and its contributions to manufacturing components (i.e., the shells) of quantum dots, as opposed to the value of the ’051 Patent with other patents and technology. *See, e.g., Omega Pats.*, 13 F.4th at 1380 (noting licenses that cover additional patents can be used to provide a rate without additional apportionment if the “distinguishing facts” are accounted for); *LaserDynamics, Inc. v. Quanta Computer, Inc.*, 694 F.3d 51, 79 (Fed. Cir. 2012) (“When relying on licenses to prove a reasonable royalty, alleging a loose or vague comparability between different technologies or licenses does not suffice.”); *Bio-Rad Lab’ys, Inc. v. 10X Genomics, Inc.*, 2018 WL 4691047, at *8 n.3 (D. Del. Sept. 28, 2018) (noting that “analysis is required to determine whether [a] rate is apportioned in a comparable fashion to the contribution of the patented technology to the accused products”).

Plaintiffs note that the presence of other patents in a license does not necessarily mean it is not comparable. (D.I. 229 at 78:4-17). That is true. In such cases, however, there is evidence or testimony to show the licenses are comparable despite the presence of the other patents. *See, e.g., Vectura*, 981 F.3d at 1041 (finding a license covering additional patents comparable because the

expert demonstrated apportionment was “baked in” and the “key component” of the license was “very similar technologies” to the patented technology); *RSB Spine, LLC v. DePuy Synthes Sales, Inc.*, 2022 WL 17084156, at *2 (D. Del. Nov. 18, 2022) (finding a license covering additional patents was comparable because the expert explained why the additional patents did not impact his calculation). Mr. Schoettelkotte has not provided such an explanation here nor has he examined the value of the '051 Patent relative to the other patents in the license agreements.

I disagree with Plaintiffs that Mr. Schoettelkotte’s *Georgia-Pacific* analysis can salvage his lack of apportionment analysis. Mr. Schoettelkotte recognizes that the licenses he analyzed included additional patent and technology rights, which “would have a downward impact on the stated royalty rates.” (D.I. 214-1, Ex. I at 22-23, 25-26, 30; *see id.* at 49). I do not think that is sufficient to apportion value to the '051 Patent as a part of a portfolio or for its contributions to the accused products. As Plaintiffs conceded at oral argument, Mr. Schoettelkotte does not state that the '051 Patent is the primary source of value of the patent portfolios in those other licenses. (D.I. 229 at 79:6-24).

Quantitative apportionment is not necessarily required, as for example when there is “built in apportionment,” *Bio Rad*, 967 F.3d at 1376, but, given that Mr. Schoettelkotte does not provide an apportionment analysis and the licenses cover a broader set of rights than what would be present in a hypothetical negotiation between the parties here, I think Mr. Schoettelkotte needs to provide more than just an up or down arrow. For example, in *RSB Spine, LLC v. DePuy Synthes Sales, Inc.*, I admitted damages testimony that did not contain a separate apportionment analysis because (1) the testimony relied on comparable licenses and (2) the expert addressed why the presence of additional licensed patents in those licenses did not impact his calculation of a reasonable royalty. 2022 WL 17084156, at *2.

For the reasons explained, Mr. Schoettelkotte has not justified his conclusion that the licenses he analyzed had built-in apportionment. Even if those licenses had built-in apportionment, Mr. Schoettelkotte has not explained how those licenses are sufficiently comparable such that further apportionment is not necessary. Therefore, I find that his testimony is improper for failure to account for apportionment and should be excluded.

2. International Sales in the Royalty Base

Defendant argues that Mr. Schoettelkotte improperly included non-infringing activities – sales of the product, which is manufactured outside of the United States, to customers outside of the United States – in his royalty base. (D.I. 199 at 18-19). At oral argument, I ruled that these sales are not protected by 35 U.S.C. § 271(g) and should be excluded from the royalty base. (D.I. 229 at 107:7-14).

B. Plaintiffs' Motion to Exclude Expert Testimony

Ms. Davis calculated a reasonable royalty for each accused product by using a “combination product” formula. (D.I. 204-1, Ex. C at 52 of 89 (Davis Rebuttal)). A simplified example illustrates the formula approach. An accused product is a quantum dot – comprised of a core and shell – where only the shell is made by a method that infringes. The total cost of manufacturing the accused product would be the cost of the shell (S) and the cost of the core (C). To calculate a reasonable royalty, the royalty base would be the total sales of the accused product (Y). In order to apportion the sales attributable to infringement, the royalty base would be reduced by the relative cost to produce the product ($S/(S+C)$). The apportioned royalty base would be $S/(S+C)$ times Y, or $(YS)/(S+C)$. Ms. Davis applied “a royalty rate of no more than 2%” to the apportioned royalty base. (D.I. 204-1, Ex. C at 54 of 89 (Davis Rebuttal)).

Plaintiffs argue that Ms. Davis' method for calculating a reasonable royalty "does not reflect the value of the patented process or the products produced with the patented process" because her royalty base is based on the relative cost of the infringing component, not its relative commercial value. (D.I. 203 at 5). Plaintiffs contend that Ms. Davis has not supported her conclusion that the relative cost of a component is a reliable proxy for the component's commercial value as she relies on a conversation with Nanosys's COO, Mr. Devenney, and statements made from Nanosys's Vice President of Worldwide Sales and Marketing, Russell Kempt. (*Id.* at 6). Mr. Devenney stated that Ms. Davis' method was reasonable, but Plaintiffs argue Mr. Devenney is not qualified to offer that conclusion because he is not an economics expert. (D.I. 220 at 3). Mr. Kempt stated that the costs of the products is factored into the pricing. (*Id.* at 3-4). Plaintiffs point out that Mr. Kempt also indicated that the value of the products were factored into pricing as well, indicating that cost-based apportionment is incomplete. (*Id.*).

Defendant argues that Ms. Davis' testimony should not be excluded because her method is properly applied in this case. Defendant contends that cost-based apportionment has been approved by the Federal Circuit. (D.I. 211 at 3 (citing *Summit 6, LLC v. Samsung Elecs. Co., Ltd.*, 802 F.3d 1283, 1297 (Fed. Cir. 2015))). Defendant maintains that Ms. Davis' method is supported because comparable licensing agreements use a similar formula for combination products to account for the relative value of patented features to unpatented features. (D.I. 211 at 4-5). Even though those provisions use component net sales or gross sales as inputs, rather than costs, Defendant contends that cost can be used as a proxy for sales in this case because the sales prices of the products are based on margins added to the cost of materials to produce the quantum dots. (*Id.* at 6).

As an initial matter, I do not read *Summit 6* to mean that cost-based apportionment can be used in every case or even in many cases. The Federal Circuit stated that the analysis done by the

expert in that case “was sufficiently tied to the facts of the case.” *Summit 6*, 802 F.3d at 1298. The accused product there was a phone with a camera. The asserted patent related a specific method that involved the camera component. The expert in *Summit 6* relied on “annual reports, internal costs and revenue spreadsheets, and interrogatory responses to determine” the fraction of product cost that was attributed to the infringing component—the camera--and the fraction of Samsung’s revenue from selling the accused phone that could be attributed to the camera. *Id.* at 1297-98. Whatever sense the cost-based apportionment made in the context of a phone with a camera, it does not make sense in the much less complex core and shell scenario.

I find that Ms. Davis’ testimony should be excluded. I agree with Ms. Davis that using the combination product formula could be reasonable in theory, especially when a similar formula was included in comparable licenses. (D.I. 211 at 5). Ms. Davis, however, deviates from the combination product formula because she uses component costs, not component sales, as inputs. Ms. Davis has not demonstrated that the cost of a component is a reliable proxy for the component’s value to the overall product. To the contrary, I think there is reason to find cost-based apportionment to be unreliable in this case.

First, Mr. Devenney is not an economics expert, so his opinion that a method sounds reasonable does not carry any weight. Even though Mr. Devenney may be aware of the pricing of the products, there is no reason to believe that he is qualified to state whether cost-based apportionment is applicable to this case.

Second, Mr. Kempt states that the value of the products is factored into pricing the products. This statement would indicate that Ms. Davis’ method is missing a key component to estimating the relative value of the different components in the accused products.

Third, Ms. Davis does not explain how the facts of this case – e.g., the roles of shells and cores in quantum dots or the role of the patented method in making the components – indicate that the relative cost of materials for a component is representative of that component’s relative contribution to the value of the finished product.

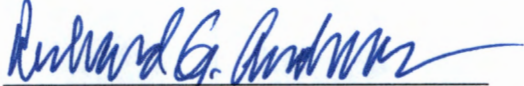
For example, for the Gen 2.8 Red product, Ms. Davis calculated an apportionment factor of 20.82%. Despite using the method to create the shells of the Gen 2.8 Red product, like ten of the other products, the apportionment factor is almost one half the value of the next closest apportionment factor.⁵ (D.I. 211 at 9). Defendant argues the lower apportionment factor stems from the fact that the Gen 2.8 Red products were developed from “‘a simpler *and more cost effective process*’ by *eliminating* ‘problematic starting materials.’” (*Id.* (citing D.I. 212-6, Ex. 6)). Defendant, however, misses the point. That the cost of manufacturing the shell decreases does not necessarily mean that the commercial value of the shell, relative to the entire quantum dot, decreases. For example, one can imagine that the fact a process can be performed at lower cost may make it more valuable, not less. Ms. Davis’ cost-based apportionment method assumes the opposite without justification.

To be clear, I am not stating that cost-based apportionment cannot be used in this case. Nor am I stating that the commercial value of the ’051 Patent should be necessarily greater for the Gen 2.8 Red product in light of Nanosys’ more cost-effective improvements. If cost-based apportionment is to be used, however, Ms. Davis must demonstrate how the method is sufficiently tied to the facts of this case. Because I find that she has not, her testimony is excluded.

⁵ The Gen 1 Red and Gen 2 Red products, which have apportionment factors of 39.01%, are the closest to Gen 2.8 Red’s apportionment factor. (D.I. 211 at 8). All other products have greater apportionment factors. (*Id.*).

IT IS SO ORDERED.

Entered this 11th day of April, 2023


United States District Judge