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UNITED STATES DISTRICT COURT

CENTRAL DISTRICT OF CALIFORNIA

(WESTERN DIVISION)

ChromaDex, Inc.,

Plaintiff,

v.

Elysium Health, Inc., and Mark Morris

Defendants.

Elysium Health, Inc.,

Counterclaimant,

v.

ChromaDex, Inc.,

Counter-Defendant.

Case No. 8:16-cv-2277-CJC (DFMx)

CHROMADEX, INC.'S REPLY IN SUPPORT OF ITS *DAUBERT* MOTION TO EXCLUDE CERTAIN OPINIONS OF DR. IAIN COCKBURN

Judge: Hon. Cormac J. Carney
Courtroom: 7C
Date: Sept. 18, 2019
Time: 9:00 AM

Pretrial Conference: Sept. 18, 2019
Trial: October 15, 2019

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I. INTRODUCTION

Elysium's Opposition to ChromaDex's *Daubert* motion seeks to obscure the serious problems with Dr. Cockburn's opinions. Elysium first tries to persuade the Court that the serious methodological shortcomings in Dr. Cockburn's opinions are mere "garden variety quibbles" that can be addressed at trial. It then tries to shift the focus away from Dr. Cockburn to ChromaDex's expert, Dr. Heeb, whose opinions are not even at issue in this motion. Elysium's arguments are unpersuasive. On this motion, Elysium bears the burden of establishing that Dr. Cockburn's opinions are reliable and helpful, as opposed to the *ipse dixit* or impermissible legal conclusions. Elysium does not come close to carrying that burden. The Court should grant ChromaDex's motion.

II. DR. COCKBURN'S OPINIONS ON PATENT MISUSE CANNOT BE SALVAGED

ChromaDex challenges three of Dr. Cockburn's opinions on "patent misuse"—namely, that NR is a "relevant market," that ChromaDex "committed patent misuse," and that ChromaDex's conduct resulted in "significant, ongoing anticompetitive effects." (Dkt. 262-1 ("Mot.") at 4.) The Opposition lays bare that those opinions are unreliable, unhelpful, and unsalvageable.

A. Dr. Cockburn's Market Definition Is Unreliable, Unhelpful, and Inadmissible

Dr. Cockburn's opinion that the "relevant market" contains a single product, NR, is especially problematic. Elysium claims that Dr. Cockburn "performed a thorough economic analysis, applying the Supreme Court-endorsed *Brown Shoe* factors" to arrive at this extremely narrow definition. (Dkt. 294 ("Opp.") at 2.) Elysium is wrong. Dr. Cockburn may have *mentioned* the *Brown Shoe* case in his report. (Ex. 1 at 21 (citing *Brown Shoe Co. v. United States*, 370 U.S. 294, 325 (1962).)[1] But he did not conduct a "thorough" *Brown Shoe* analysis in any respect. Rather, he picked the market he wanted, then tried to justify it with a smattering of observations, which Elysium now

[1] All citations to Exhibits ("Ex.") refer to those Exhibits attached to the Declaration of Craig E. TenBroeck at Dkt. 260-2.

strains to tie back to *Brown Shoe*. Dr. Cockburn's analysis evidences none of the rigor employed by experts seeking to identify the contours of relevant product market. His opinion is, therefore, unreliable.

It bears repeating, because Elysium pointedly ignores it, that the Ninth Circuit has never held that an economist can define a relevant product market *exclusively* by reference to the *Brown Shoe* factors. (Opp. at 7.) At least two circuits have cautioned that these indicia "were never intended to exclude" actual data and a reasonable analysis demonstrating that a product or service is a good substitute for another. *Reifert v. S. Cent. Wis. MLS Corp.*, 450 F.3d 312, 320 (7th Cir. 2006); *Ky. Speedway, LLC v. Nat'l Ass'n of Stock Car Auto Racing, Inc.*, 588 F.3d 908, 918 (6th Cir. 2009) (holding that "these practical indicia come into play only after the 'outer boundaries of a product market are determined' by evaluating 'the reasonable interchangeability of use or the cross-elasticity of demand between the product itself and substitutes for it'"). Elysium concedes that Dr. Cockburn did not perform a cross-elasticity study. (Opp. at 10.) And while it halfheartedly suggests that Dr. Cockburn performed a "hypothetical monopoly test," no evidence shows that he in fact did so.[2] (*Id.* at 11.)

Even assuming that a "*Brown Shoe* analysis" could suffice in some circumstances, Dr. Cockburn's superficial assessment of a few *Brown Shoe* factors provides no basis to conclude that an NR-only market reflects competitive reality.

[2] Elysium claims that ChromaDex "ignores Dr. Cockburn's analysis of market entry by additional suppliers and the barriers they faced in the relevant time frame" and that "ChromaDex's expert agrees that a hypothetical monopolist test can be conducted in this case by examining the market entry of new NR suppliers." (Opp. at 11.) This statement is misleading. ChromaDex's expert, Dr. Heeb, analyzed ChromaDex's actual price charged to Elysium against the prices charged by Elysium's other NR suppliers to determine if ChromaDex was pricing above a competitive level. In contrast, Dr. Cockburn's analysis was concerned with time it took other manufacturers to scale up their production levels and the implied barriers to entry. These points are barely related, and Dr. Cockburn's analysis has little (if anything) to do with the hypothetical monopolist test.

Skepticism of Dr. Cockburn's chosen market is warranted because a relevant market "generally cannot be limited to a single manufacturer's products." ABA Section of Antitrust Law, Antitrust Law Developments (7th ed. 2012); *see also Apple, Inc. v. Psystar Corp.*, 586 F. Supp. 2d 1190, 1198 (N.D. Cal. 2008) (holding such markets are "extremely rare"); *HCI Techs., Inc. v. Avaya, Inc.*, 446 F. Supp. 2d 518, 522 (E.D. Va. 2006) ("There is no merit in HCI's contention that Avaya has market power because it has 100% of the market as defined by the sales of its own products.").

The Supreme Court in *Brown Shoe* identified seven "indicia" for identifying "submarkets." 370 U.S. 294, 325 (1962). These include: industry or public recognition, the product's peculiar characteristics and uses, unique production facilities, distinct customers, distinct prices, sensitivity to price changes, and specialized vendors. *Id.* Elysium says there is no requirement that an economist discuss "all" of the *Brown Shoe* factors and that "three or four" may be enough. (Opp. at 6.) But that misses the point. The problem is not how many boxes Dr. Cockburn checked (although he did not check as many as Elysium claims). The problem is that Dr. Cockburn's assessment of the *Brown Shoe* indicia is insufficient. This speaks to its reliability, not its weight. *See In re Live Concert Antitrust Litig.*, 863 F. Supp. 2d 966, 994 (C.D. Cal. 2012) (ruling expert's truncated *Brown Shoe* analysis was not "sufficiently robust to warrant admission under Rule 702 and *Daubert*"); *McLaughlin Equip. Co. v. Servaas*, 2004 WL 1629603, at *6 (S.D. Ind. Feb. 18, 2004).

Elysium acknowledges that Dr. Cockburn ignored the fourth indicia, "distinct customers," and while Elysium claims in a footnote that Dr. Cockburn addressed the third and seventh indicia, "unique production facilities" and "specialized vendors," his report cites to no evidence that producing NR requires special machinery (it doesn't) or that NR's vendors are "specialized" in the sense that they do not sell other things. (Opp. at 6 n.3.) Insofar as Dr. Cockburn "considered" these three factors at all (he didn't), Elysium seems to concede that he assigned them no weight. (*Id.* at 6.)

With respect to the fifth and sixth indicia, "distinct prices" and "sensitivity to price changes," Dr. Cockburn only considered *one* potential substitute (niacin). (Mot. at 9.) Despite what Elysium claims, a failure to thoroughly consider substitutes goes to admissibility, not just weight. *Ky Speedway*, 588 F.3d at 918. Elysium wants the Court to think that Dr. Cockburn's analysis was broader, that he *also* "considered" pricing of NMN. (Opp. at 9–10.) That assertion, however, is not correct. Dr. Cockburn's report says only that "there is not a consistent price for NMN products at the retail level." (Ex. 1 at 28.) In other words, Elysium is using "considered" to mean that Dr. Cockburn looked for the data but did not find or have data to do the analysis. That is analogous to saying, "I looked for a cross-price elasticity analysis but could not find one. But since I looked for it, I believe that I considered cross-price elasticities." That hardly qualifies as a reasoned analysis sufficient to satisfy *Daubert*.

As for the first indicia, "industry recognition," Elysium's argument seems to be that whenever a company uses the word "market" in a press release or sales document that is indicative of a discrete antitrust market. (Opp. at 9.) That is not the law. *U.S. Horticultural Supply, Inc. v. Scotts Co.*, 2009 WL 89692, at *18 (E.D. Pa. Jan. 13, 2009) (holding internal marketing documents failed to support the existence of a market where there was no suggestion that the company considered its references to a "market" to conform to the antitrust definition of a market). In the cases Elysium cites, the "industry recognition" evidence spoke directly to specific competitive dynamics. *See F.T.C. v. Warner Commc'ns Inc.*, 742 F.2d 1156, 1163 (9th Cir. 1984) (involving affidavits from company officials indicating that record industry recognizes prerecorded music as a market separate from the recorded music market); *F.T.C. v. Whole Foods Mkt., Inc.*, 548 F.3d 1028, 1045 (D.C. Cir. 2008) (Tatel, J., concurring) (considering dozens of independent industry studies differentiating organic grocery stores from conventional ones, as well as statements by the companies themselves identifying their competition); *United States v. Bazaarvoice, Inc.*, 2014 WL 203966, at *22–23 (N.D. Cal. Jan. 8, 2014) (considering materials sent to board members identifying competitors, market size, and

market share; companies repeatedly described themselves as a "duopoly"). Dr. Cockburn cites to no comparable evidence with respect to the ChromaDex documents he relied on here.

Finally, with respect to indicia number two, "peculiar characteristics," Dr. Cockburn simply highlights differences between NR and other NAD precursors. He cites to no evidence that these differences have "economic significance," *i.e.*, that they insulate sales of NR from competition with other supplements. Stated another way, there is no evidence in Dr. Cockburn's report that these peculiar characteristics create "an economically significant barrier to customer cross-over." *See Thurman Indus., Inc. v. Pay 'N Pak Stores, Inc.*, 875 F.2d 1369, 1376 (9th Cir. 1989).

In sum, Dr. Cockburn's so-called *Brown Shoe* analysis in "sufficiently robust to warrant admission under Rule 702 and *Daubert*." *Live Concert*, 863 F. Supp. 2d at 994. It is not surprising, therefore, that Elysium spends as much time in its Opposition critiquing ChromaDex's rebuttal expert, Dr. Heeb, as it does defending Dr. Cockburn. (Opp. at 7–8, 11.) These critiques are irrelevant to whether or not Dr. Cockburn's opinions are admissible, and it is at least worth mention, they are also not accurate. For example, Dr. Heeb did not "assert" that "the relevant market should include ***all*** anti-aging supplements." (Opp. at 7 (emphasis in Elysium's motion).) What Dr. Heeb said is that "anti-aging supplements comprise a more plausible antitrust market," which is a distinctly different point. Dr. Heeb himself has not offered a formal opinion about the definition of the relevant market because that is not ChromaDex's burden. In any event, all of this is a sideshow because the merits of Dr. Heeb's opinions are not at issue in this motion.

B. Dr. Cockburn's Opinions About ChromaDex's Culpability Are Impermissible Legal Conclusions

ChromaDex also seeks to prevent Dr. Cockburn from opining that ChromaDex acted wrongfully, *e.g.*, that it "committed patent misuse," "impermissibly" broadened the scope of its patent rights, and "coerce[d] its customers" to establish the NIAGEN

brand. (Mot. at 11–12.) These are just legal conclusions masquerading as expert testimony and are thus not admissible.

Tellingly, Elysium spends more than two pages rebutting this argument, without actually defending *those* opinions. (Opp. at 11–13.) Instead, Elysium defends *other* opinions that are less objectionable only because they stop short of declaring ChromaDex a wrongdoer. (*Id.*) To be clear, ChromaDex does not seek to prevent Dr. Cockburn from giving pedestrian observations about "the advantages brands convey." (*Id.* at 11.) What it objects to is Dr. Cockburn telling the factfinder what result to reach. That is where Dr. Cockburn repeatedly crosses the line. *See Glenwood Sys., LLC v. Thirugnanam*, 2012 WL 1865453, at *3 (C.D. Cal. May 21, 2012) ("Although expert testimony concerning an ultimate issue is not per se improper . . . 'an expert witness cannot give an opinion as to her *legal conclusion*, *i.e.*, an opinion on an ultimate issue of law.'" (citation omitted)).

C. Dr. Cockburn's Novel Methodology for Finding Competitive Harm Is Contrary to Law

Dr. Cockburn's opinion that ChromaDex's conduct resulted in "significant, ongoing anticompetitive effects" should be excluded because (i) it is based on Dr. Cockburn's bogus market and (ii) his apparent methodology of finding competitive harm whenever a *competitor* is harmed is contrary to law. *See Procaps S.A. v. Patheon, Inc.*, 845 F.3d 1072, 1086 (11th Cir. 2016) (ruling injury to a competitor alone is insufficient to establish harm to competition); *Bhan v. NME Hosps., Inc.*, 929 F.2d 1404, 1414 (9th Cir. 1991) (holding proof "that one nurse anesthetist no longer works at one hospital. . . . is not enough to demonstrate actual detrimental effects on competition"); *Prods. Liab. Ins. Agency v. Crum & Forster Ins.*, 682 F.2d 660, 663 (7th Cir. 1982) ("Now there is a sense in which eliminating even a single competitor reduces competition. But it is not the sense that is relevant in deciding whether the antitrust laws have been violated."). The Opposition seems to confirm that Dr. Cockburn has no empirical evidence of harm felt by consumers, *e.g.*, higher prices

or a reduction in quality. (Opp. at 13.) Instead, Dr. Cockburn is "positing a new theory" of liability to find anticompetitive effects "where the law finds none." *Williamson Oil Co. v. Phillip Morris USA*, 346 F.3d 1287, 1322–23 (11th Cir. 2003). This opinion is of no use to the jury. The Court should exclude it. *Id.* (holding testimony inconsistent with the "state of the law" is inadmissible).

D. The Court Should Not Postpone the *Daubert* Inquiry

Last, Elysium argues that the Court should put off its *Daubert* analysis of Dr. Cockburn's patent misuse opinions because the parties have agreed that this counterclaim should be decided by the Court, not a jury. (Opp. at 5.) The Court should not defer. While the safeguards provided for under *Daubert* are not "as essential" in the context of a bench trial, a trial judge can still exclude expert testimony if it is either "unreliable or irrelevant." *Atl. Specialty Ins. v. Porter, Inc.*, 742 F. App'x 850, 852 n.4 (5th Cir. 2018); *see also Beech Aircraft Corp. v. United States*, 51 F.3d 834, 842 (9th Cir. 1995) (holding that trial court properly excluded expert before bench trial); *CFM Commc'ns, LLC v. Mitts Telecasting Co.*, 424 F. Supp. 2d 1229, 1234 (E.D. Cal. 2005) (excluding several opinions in advance of a bench trial). The numerous flaws in Dr. Cockburn's opinions on patent misuse are manifest, as outlined above. Postponing the *Daubert* inquiry would only serve to keep a deficient counterclaim in play, and waste the Court's time and resources by unnecessarily prolonging trial.

III. DR. COCKBURN'S LOST PROFITS OPINION INVITES JURORS TO SPECULATE

Elysium's defense of Dr. Cockburn's lost profits opinion fares no better. Elysium claims that Dr. Cockburn used a "sound methodology" to calculate lost profits. (Opp. at 15.) That not accurate. Dr. Cockburn's "methodology" for calculating lost profits is not testable, repeatable, or subject to peer review or publication. Instead, he demands that everyone trust him, which the law prohibits. Fed. R. Evid. 702, advisory committee's note (2000) ("The trial court's gatekeeping function requires more than simply 'taking the expert's word for it.'").

Dr. Cockburn opines that Elysium would have made $68,355 to $571,981 more on sales of Basis if three other supplements did not exist. (Ex. 1 at 72.) This, in a nutshell, is his "methodology." He starts with a product called Mitoboost. (*Id.* at 64–65.) Conceding (as he must) that Mitoboost is different from Basis, and that "[n]ot all Mitoboost customers can be assumed to purchase BASIS in the but-for world," Dr. Cockburn estimates that Elysium would have captured between 10% and 90% of Mitoboost's sales. (*Id.*) Why is the upper bound 90%, and not 80%, or even 50%? Who knows? Dr. Cockburn never explains, nor does he ever answer the fundamental question of how a range of 10% to 90% can ever be considered reliable.

The guesswork is not done yet. Dr. Cockburn does not show his math and otherwise provides no objective basis for choosing this facially unreasonable range of numbers. He is just speculating, based on his "knowledge and experience." (Mot. at 15.) Dr. Cockburn then uses that speculative range as a baseline for other supplements, adjusting it (seemingly by feel) to account for other product differences. (Ex. 1 at 70–71.) None of this is testable or repeatable by another economist because Dr. Cockburn's baseline—10% to 90%—came out of a "black box." *See GPNE Corp. v. Apple, Inc.*, 2014 WL 1494247, at *6 (N.D. Cal. Apr. 16, 2014) ("Experts must follow some discernable methodology, and may not be 'a black box into which data is fed at one end and from which an answer emerges at the other.'"). "Cross-examination cannot fix that problem," because ChromaDex cannot effectively challenge a methodology that it (and the jury) cannot see. *Open Text S.A. v. Box, Inc.*, 2015 WL 349197, at *6 (N.D. Cal. Jan. 23, 2015).

Elysium hopefully claims that lost profits are "always speculative" and that "mathematical precision" is not required. (Opp. at 18.) That misses the point. A jury must be able to see "how the data drives the conclusion," even if the conclusion is an approximation. *Open Text*, 2015 WL 349197, at *6. Take for example the facts in *Orazco*, a case cited by Elysium. The expert in that case extrapolated lost profits by creating a "trend line" from historical sales data. *Orozco v. WPV San Jose, LLC*, 36 Cal.

App. 5th 375, 395 (2019). That opinion, unlike Dr. Cockburn's, could be tested in an objective way. Or consider *Corning*, another case cited by Elysium. There, the expert used a starting royalty "reference range" in estimating a hypothetical royalty rate. *Corning Optical Commc'ns Wireless Ltd. v. Solid, Inc.*, 2015 WL 5655192, at *1 (N.D. Cal. Sept. 24, 2015). Unlike Dr. Cockburn's 10% to 90%, however, the percentages were based on *data*—namely the defendants' combined operating margin on systems accused of patent infringement and the blended incremental profit margin of the plaintiff and its parent, respectively. *Id.* Here, the Court cannot conclude whether Dr. Cockburn's methodology is reliable because it is invisible. Exclusion is the appropriate remedy.

IV. DR. COCKBURN'S CGMP OPINION SHOULD BE EXCLUDED

Dr. Cockburn's "cGMP damages opinion" should meet the same fate. Elysium claims that ChromaDex's "beef is with Dr. Cockburn's factual assumptions and conclusions, not with his methods." (Opp. at 19.) "But conclusions and methodology are not entirely distinct from one another." *Gen. Elec. Co. v. Joiner*, 522 U.S. 136, 146, (1997). "A court may conclude that there is simply too great an analytical gap between the data and the opinion proffered." *Id.* That conclusion is warranted here.

Dr. Cockburn's "analysis" of cGMP damages is just four paragraphs. (Ex. 1 at 72–73.) In those paragraphs, he fails to explain key aspects of his methodology. For example, Dr. Cockburn claims to estimate Elysium's but-for price by examining "the prices negotiated and paid by comparable customers." (*Id.* at 73.) But his report does not explain how he identified (or rejected) any customer as "comparable." (*Id.*) The Court cannot conclude whether Dr. Cockburn's methodology is reliable (as it is required to do) when key aspects of that methodology are invisible. *See Gen. Elec. Co.*, 522 U.S. at 146 ("[N]othing in either *Daubert* or the Federal Rules of Evidence requires a district court to admit opinion evidence that is connected to existing data only by the *ipse dixit* of the expert.") Because that analytical gap is too great, his cGMP damages opinion should not be allowed to go to the jury.

V. DR. COCKBURN'S REBUTTAL OPINIONS SHOULD BE EXCLUDED

Finally, Dr. Cockburn's rebuttal opinions should be excluded because he is just arguing a legal brief. Elysium accuses ChromaDex of making generalizations about improper legal opinions without identifying any particular opinion or conclusion it believes should be stricken." (Opp. at 21.) That is false. ChromaDex gave two examples: Dr. Cockburn's statement about what ChromaDex "must show" to recover lost profits, (Ex. 11 at 299), and his gratuitous reference to "ChromaDex's unsupported legal claims," (*id.* at 303). Those statements are just illustrative.

Time and again, Dr. Cockburn opines about what is legally required and then usurps the jury's role by applying law to fact. (*Id.* at 260 ("Mr. Gunderson . . . fails to establish, in any meaningful way, the required causal nexus between each of the alleged misappropriations, disclosures, and breaches that constitute these 'wrongful acts' and any effect or harm to ChromaDex or unjust benefit to either Elysium or Mr. Morris that results."), 290 ("[T]he proper measure of damages is the measurement of the incremental profits/losses specifically causally tied to each alleged bad act."), 298 ("Contradicting all of ChromaDex's supposition and Mr. Gunderson's assumptions and leaps of faith are very inconvenient (for ChromaDex) actual facts and evidence in this case.").) Other than legal cases, Dr. Cockburn cites no other source for his opinion that ChromaDex's expert was required to show causation, and in fact Dr. Cockburn concedes that his rebuttal opinion is based on his application of a "*legal requirement* of conducting an objective analysis into the causal effect." (*Id.* at 267 (emphasis added).) And, at points, he even argues cases. (*Id.* at 292 ("Mr. Gunderson appears to opine that misappropriation of all of the alleged trade secrets and alleged confidential information entitles ChromaDex to all of Elysium's profits. However, in *O2 Micro*, the Court found that 'expert testimony regarding damages for misappropriation of all trade secret [sic] was useless to the jury' because '[t]he jury was then left without sufficient evidence, or a reasonable basis, to determine the unjust enrichment damages.'").) There are myriad other examples from his rebuttal report, which reads like a legal brief. Such advocacy

should be excluded. *See CFM Commc'ns, LLC*, 424 F. Supp. 2d at 1235–36 (excluding an expert's report from evidence because it "read[s] like a legal brief" and "[t]he Court is perfectly able to review . . . decisions and regulations to decide how the law applies to the present facts").

VI. CONCLUSION

For the foregoing reasons, ChromaDex respectfully requests that the Court grant its motion to exclude certain opinions of Dr. Iain Cockburn.

Dated: September 4, 2019

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