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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-02277-CJC-DFM
[Assigned to the Hon. Cormac J. Carney]

ELYSIUM HEALTH, INC.'S AND MARK MORRIS'S MEMORANDUM OF POINTS AND AUTHORITIES IN OPPOSITION TO CHROMADEX, INC.'S *DAUBERT* MOTION

Pre-Trial Conference: September 18, 2019
Trial: October 15, 2019

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MEMORANDUM OF POINTS AND AUTHORITIES

ChromaDex's *Daubert* Motion seeking preemptively to exclude the testimony of Elysium's expert economist, Dr. Iain Cockburn, should be denied. Dr. Cockburn conducted a thorough and skillful economic analysis of patent misuse and damages issues, presented in the form of a 69-page written report that meets all the requirements of F.R.C.P. 26(a)(2). ChromaDex's criticisms of Dr. Cockburn's opinions misapply the applicable law and ignore relevant evidence. At best, they amount to the sort of garden variety quibbles with an expert's reasoning that can be explored in cross examination or challenged by ChromaDex's own expert in his direct testimony; they are not grounds for exclusion. Moreover, with respect to Dr. Cockburn's opinions on patent misuse, ChromaDex ignores the parties' mutual agreement that patent misuse should be tried to the Court, not the jury. There is no reason to exclude expert opinions in advance of trial where the factfinder and gatekeeper are one and the same.

I. BACKGROUND

Dr. Iain Cockburn is the Richard C. Shipley Professor in Management and Chair of the Strategy and Innovation Department at Boston University's Questrom School of Business. In this capacity, he conducts research on the economics of innovation, with specific application to the pharmaceutical industry, and teaches graduate classes on business strategy, competition, innovation, and intellectual property that focus primarily on the biopharmaceutical, software, and information technology industries. (Cockburn Ex. A[1] at ¶ 1). Dr. Cockburn received his undergraduate degree from Queen Mary College, University of London in 1984, and his PhD in Economics from Harvard University in 1990. (*Id.* at ¶ 2).

[1] "Cockburn Exhibit A" refers to the June 21, 2019 Expert Report of Dr. Iain M. Cockburn, attached to the Declaration of Dr. Iain M. Cockburn filed concurrently with Elysium's and Morris's Opposition to ChromaDex's Motion for Summary Judgment, Ex. A; *see also* Exhibit 1 attached to the Declaration of Craig E. TenBroeck in Support of ChromaDex's *Daubert* Motions to Exclude Certain Opinions of Dr. Iain Cockburn. (ECF No. 262-3).

Dr. Cockburn was retained by Elysium to provide his expert opinions with regard to patent misuse issues, specifically:

- Whether ChromaDex possesses market power in a relevant market;
- The scope and nature of ChromaDex's alleged patent misuse;
- The anticompetitive effects, if any, resulting from the alleged patent misuse; and
- Whether ChromaDex's alleged patent misuse has been purged and its effects dissipated.

(*Id.* at ¶ 7).

Dr. Cockburn also was retained to determine the economic damages owed to Elysium in the event the trier-of-fact finds ChromaDex breached certain provisions of the supply agreement between ChromaDex and Elysium (the "NR Supply Agreement"), including the "most favored nation" pricing provision ("MFN Provision"), the product exclusivity provision ("Exclusivity Provision"), and the current good manufacturing provision ("cGMP Provision"). (*Id.* at ¶ 8).

A. Dr. Cockburn's Opinions Regarding Patent Misuse

In his Expert Report submitted on June 21, 2019, Dr. Iain Cockburn opines that "the manufacture and supply of the NR [nicotinamide riboside] ingredient constitutes a distinct product market in the United States." (Cockburn Ex. A at ¶ 11). He continues, "[a]t the present time the relevant market consists exclusively of NR due primarily to the lack of available substitutes and the lack of reasonable interchangeability between NR and other potential nicotinamide adenine dinucleotide ("NAD+") precursors." (*Id.*) To reach this opinion, Dr. Cockburn performed a thorough economic analysis, applying the Supreme-Court-endorsed *Brown Shoe* factors to arrive at his definition of the market, as discussed in further detail below. (*Id.* at ¶ 52).

Dr. Cockburn also opines that ChromaDex possesses market power in the above-defined market:

> Through exclusive licenses to certain patent rights, ChromaDex has established itself as the dominant (and until recently, the only) NR ingredient supplier in the U.S. market; controlling the manufacture and distribution of essentially all of the commercially available NR supply throughout the relevant time.

(*Id.* at ¶ 12).

In his report, Dr. Cockburn explains that ChromaDex's abuse of its patent rights has had anticompetitive effects on the market:

> ChromaDex's efforts to use its patent monopoly to establish NIAGEN as the founding trade name for NR has resulted in significant, ongoing anticompetitive effects in the market. These anticompetitive effects can be expected to persist even after the patent monopoly is lost.

(*Id.* at ¶ 14).

In Dr. Cockburn's opinion, ChromaDex's patent misuse has not been purged and the effects of the misuse have not been dissipated:

> ChromaDex continues to use the NIAGEN mark and reap the benefits of its misuse. In addition, Elysium has not, to date, recovered monies it was coerced into paying ChromaDex under the terms of its mandatory trademark license, nor has it recovered the opportunity cost of those monies.

(*Id.* at ¶ 15).

B. Dr. Cockburn's Opinions Regarding Damages

In his initial report, Dr. Cockburn expresses opinions regarding the damages attributable to and economic significance of ChromaDex's alleged breaches of contract. (Cockburn Ex. A at 4). ChromaDex's motion seeks to exclude two of Dr. Cockburn's damages opinions: (1) his lost profits analysis related to ChromaDex's breach of the provision of the parties contract that granted Elysium exclusivity over sales of nicotinamide riboside ("NR") and pterostilbene ("PT") or any substantially similar ingredients in combination ("lost profits opinion"); and (2) his damages calculations for ChromaDex's failure to comply with the provision of the parties' supply agreement that required ChromaDex to deliver NR manufactured in

accordance with current good manufacturing practices applicable to pharmaceuticals ("cGMP opinion"). (ChromaDex's Memorandum in Support of *Daubert* Motion to Exclude Certain Opinions of Dr. Iain Cockburn (ECF No. 262-1) (hereinafter "Mem.") at 14.). As to the lost profits opinion, Dr. Cockburn considered evidence regarding the products sold by ChromaDex's customers in breach of the exclusivity provision and, after taking into account certain relevant factors -- such as marketing channel, price, dosage, and ratio of NR to resveratrol (an ingredient substantially similar to pterostilbene) relative to Elysium's product, Basis -- he estimated a range of lost profits suffered by Elysium. (Cockburn Ex. A at 62-63). As to the cGMP opinion, Dr. Cockburn formed an opinion as to the price at which Elysium would have purchased NR from ChromaDex had it been told that the NR being purchased was not pharmaceutical cGMP-compliant, and determined this price by evaluating data concerning NR purchases by customers comparable to Elysium whose agreements with ChromaDex did not require ChromaDex to deliver pharmaceutical cGMP-compliant material. (Cockburn Ex. A at 67-68).

Finally, ChromaDex seeks to exclude Dr. Cockburn's rebuttal to the expert report of Lance E. Gunderson ("Gunderson") regarding ChromaDex's purported damages. Dr. Cockburn's rebuttal addresses the overarching and fatal flaws in Gunderson's methodology and analysis, including Gunderson's complete failure to establish any causal link between any alleged wrongdoing and any purported economic consequences to ChromaDex or benefits to Elysium, while also providing point-by-point responses where, for example, Gunderson's damages opinions are unsupported by or contradict the economic evidence. (ECF No. 246-14 at 4).

II. CHROMADEX IS NOT ENTITLED TO EXCLUSION OF DR. COCKBURN'S OPINIONS REGARDING PATENT MISUSE

Dr. Cockburn's analyses and opinions regarding patent misuse, including market definition, the economic significance of ChromaDex's misconduct, and the resulting anticompetitive effects are well supported by the factual record and

economics. They are thorough, reliable, and should not be excluded in advance of the upcoming non-jury trial on patent misuse.

As the Ninth Circuit has explained, *Daubert* sets a "liberal standard of admissibility" and thus, as a general rule, "vigorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof are the traditional and appropriate means of attacking" disputed but admissible expert testimony. *Dorn v. Burlington N. Santa Fe. R.R. Co.*, 397 F.3d 1183, 1196 (9th Cir. 2005). ChromaDex faces a particularly high bar in demanding exclusion of Dr. Cockburn's patent misuse opinions in advance of trial, as the parties agree that patent misuse should be tried to the Court, and not to a jury. As the Ninth Circuit explained just last year:

> Daubert is meant to protect ***juries*** from being swayed by dubious scientific testimony. When the district court sits as the finder of fact, there is less need for the gatekeeper to keep the gate when the gatekeeper is keeping the gate only for himself…. In bench trials, the district court is able to make its reliability determination during, rather than in advance of, trial. Thus, where the factfinder and the gatekeeper are the same, the court does not err in admitting the evidence subject to the ability later to exclude it or disregard it if it turns out not to meet the standard of reliability established by Rule 702.

United States v. Flores, 901 F.3d 1150, 1165 (9th Cir. 2018) (internal quotation marks and citations omitted) (emphasis in original).

A. Dr. Cockburn's Opinion that there is a Relevant Market for the Supply of NR is Based on Sound, Accepted Methodologies

ChromaDex's motion, contending the Court should apply rigid categorical rules to expert testimony on market definition, ignores courts' recognition that market definition is a flexible, real-world analysis. As the Supreme Court long ago explained, "in testing for the relevant market… no more definite rule can be declared than that commodities reasonably interchangeable by consumers for the same purposes" form the relevant market. *Int'l Boxing Club of New York, Inc. v. U.S.*, 358 U.S. 242, 249 (1959). In its landmark decision in *Brown Shoe Co. v. United States*, 370 U.S. 294 (1962), the Court held that a market "may be determined by examining

such practical indicia as industry or public recognition of the submarket as a separate economic entity, the product's peculiar characteristics and uses, unique production facilities, distinct customers, distinct prices, sensitivity to price changes, and specialized vendors." *Id.* at 325.[2] In short, defining the relevant market involves a practical and inclusive approach in which all relevant considerations can be brought to bear on market definition.

1. ChromaDex's Motion Admits Dr. Cockburn Applied *Brown Shoe*

ChromaDex's claim that Dr. Cockburn's opinion "did not use an accepted methodology" is belied by its own motion. (Mem. at 5). ChromaDex concedes that Dr. Cockburn conducted a *Brown Shoe* analysis and gave weight to at least four *Brown Shoe* factors. (Mem. at 7-8). (In fact, he considered six.)[3] That concession alone dooms ChromaDex's motion.

ChromaDex argues as its "most notabl[e]" point, that Dr. Cockburn did not address ***all*** of the *Brown Shoe* factors. (Mem. at 7). But there is no requirement that all of the *Brown Shoe* factors be discussed as a prerequisite of admissibility. Indeed, in one of the cases on which ChromaDex relies, this Court explained that "three or four of these indicia has been held sufficient to delineate a submarket." *In re Live Concert Antitrust Litig.*, 863 F. Supp. 2d 966, 989 (C.D. Cal. 2012). *See, e.g., Abex Corp. v. FTC,* 420 F.2d 928, 931-32 (6th Cir. 1970) (addressing three factors)

[2] Although *Brown Shoe* references submarkets, the *Brown Shoe* analysis applies equally to primary markets. *Olin Corp. v. FTC,* 986 F.2d 1295, 1299 (9th Cir. 1993).

[3] Dr. Cockburn's addresses ***six*** of the seven *Brown Shoe* factors. ChromaDex concedes Dr. Cockburn addressed (1) peculiar characteristics and uses (*see* Mem. at 8-9); (2) industry or public recognition (*see* Mem. at 9); (3) distinct prices; and (4) sensitivity to price changes (*see* Mem. at 9). He also addresses (5) unique production facilities and (6) specialized vendors. For example, he notes that ChromaDex touted itself as the only supplier of NR and describes the relevance of that fact to substitutability. (Cockburn Ex. A at ¶ 68). Similarly, he discusses manufacturing differences between NR and other potential substitutes. (*Id.* at ¶ 66). In addition, Dr. Cockburn describes barriers to entry to new suppliers of NR (*Id.* at ¶¶ 91-98) and considers Elysium's difficulties in obtaining alternative supply (*Id.* at ¶¶ 107-14).

Reynolds Metals Co. v. FTC, 309 F.2d 223, 227 (D.C. Cir. 1962) (addressing three factors). As another court observed, "[s]ince the [Supreme] Court described these factors as 'practical indicia' rather than requirements, subsequent cases have found that submarkets can exist even if only some of these factors are present." *FTC v. Staples*, 970 F. Supp. 1066, 1075 (D.D.C. 1997). Dr. Cockburn's analysis of six of the seven *Brown Shoe* factors is more than sufficient for *Daubert* and admissibility purposes. *See In re Korean Ramen Antitrust Litig.*, 2018 U.S. Dist. LEXIS 69877, at *25 (N.D. Cal. Apr. 24, 2018) (denying *Daubert* motion where expert had considered "some of the more significant… *Brown Shoe* practical indicia").

In fact, Dr. Cockburn's analysis was far more thorough than that of ChromaDex's expert, Dr. Heeb. Dr. Heeb makes the implausible assertion that the relevant market should include ***all*** anti-aging supplements, (Sacca Decl. Ex. 1 at ¶¶ 57-63), even though he admits, "I have not undertaken to define the market." (Sacca Decl. Ex. 2 at 118). His opinion that NR is supposedly substitutable with any and all anti-aging supplements does not address a single *Brown Shoe* factor, despite ChromaDex's claim that Dr. Cockburn's opinion must be excluded for leaving out one of them. Dr. Heeb's opinion, instead, was based on the dubious and unreliable method of running isolated searches on Google and Amazon to see what products come up. (Sacca Decl. Ex. 2 at pp. 119-43; Sacca Decl. Ex. 1 at ¶¶ 57-63).[4]

[4] Dr. Heeb ran searches on Amazon to see what other products came up, and ran searches on Google to determine what Google ads appeared and what products Google identified as items other people has searched for. (Sacca Decl. Ex. 1 at ¶¶ 19-26). Dr. Heeb admitted that he did not know how Amazon weighs its data, whether it takes price elasticity or reasonable interchangeability into account, what kind of artificial intelligence it uses, or if it always provides substitutes in searches. (Sacca Decl. Ex. 2 at 124-26). He also did not know what artificial intelligence Google used, how it weighted its inputs, or even what all of those inputs were. (*Id.* at 132-35). He conceded that items that appear in Google's previously searched for pane were not always substitutes. (*Id.*).

2. ChromaDex's Criticisms of Dr. Cockburn's Application of the *Brown Shoe* Factors Lack Merit, and at Most Go to Weight

ChromaDex next asserts that Dr. Cockburn's analysis of the *Brown Shoe* factors was "only superficial . . . " (Mem. at 8). Even if true—and it is not—any claimed superficiality would go at most to the weight, not to the admissibility, of his testimony. *See In re Korean Ramen Antitrust Litig.*, 2018 U.S. Dist. LEXIS 69877, at *27 (N.D. Cal. April 24, 2018) ("Defendants' points about errors and failures incorporated into Mangum's model may be well-taken by the trier of fact, but they go to weight and not admissibility."). ChromaDex is wrong in any case.

Peculiar Characteristics and Uses. Dr. Cockburn discusses at length the differences between NR and other NAD precursors, and cites to evidence—including numerous statements by ChromaDex employees, including its chief scientific officer, explaining why NR is not substitutable. (Cockburn Ex. A at ¶¶ 53-66).

ChromaDex complains first that Dr. Cockburn does not articulate why the unique properties of NR are economically significant. Not so. In his report, he explains "Products which are reasonably interchangeable in a functional sense are generally also economic substitutes." (Cockburn Ex. A at ¶ 50). Overall, his analysis of substitutability goes to the core of the reasonable interchangeability analysis identified by the Supreme Court. *See FTC v. Warner Commc'ns., Inc.*, 742 F.2d 1156, 1163 (9th Cir. 1984).

ChromaDex next complains that Dr. Cockburn did not conduct market research or consumer surveys. But, then again, neither did ChromaDex's expert when he offered his opinion on substitutability. (*See* Sacca Decl. Ex. 2 at pp. 19, 113-14). The reason is simple: there is no requirement for an expert to conduct such surveys for his testimony to be admissible. *E.g.*, *Warner*, 742 F.2d at 1163 ("Although there is no direct evidence that consumers regard the prerecorded music market as a separate market, prerecorded music has distinct characteristics…. These

characteristics suggest that prerecorded music and home tapes are not interchangeable."). In any event, Dr. Cockburn does consider the views of customers: Elysium itself was a customer of ChromaDex. (Cockburn Ex. A at ¶ 65).

Industry Recognition. ChromaDex makes the extraordinary argument that its own admissions defining the market in which it operates are not a proper basis for a market analysis. It defies logic and common sense to contend that the views of a seller about the contours of its own market lack economic and evidentiary significance. See *Todd v. Exxon Corp.*, 275 F.3d 191, 205 (2nd Cir. 2001) ("It is significant because we assume that the economic actors usually have accurate perceptions of economic realities.") (internal quotation marks and citation omitted). ChromaDex cites nothing other than a single review article to support its claim. Its failure to identify case support for its position is unsurprising, because the cases go decidedly the other way. *E.g. Warner*, 742 F.2d at 1163 ("[R]ecord company documents and affidavits from company officials… indicate that the record industry recognizes prerecorded music as a market"); *United States v. Bazaarvoice, Inc.*, 2014 U.S. Dist. LEXIS 3284, *226-228 (N.D. Cal., Jan. 24, 2014) (citing to company documents, admissions of CEO and co-founder); *FTC v. Whole Foods Market, Inc.*, 548 F.3d 1028, 1045 (D.C. Cir. 2008) (Tatel, J., concurring) (merging companies' "CEOs both believed that their companies occupied a market separate from the conventional grocery store industry"); *Spirit Airlines, Inc. v. Northwest Airlines, Inc.*, 431 F.3d 917, 933 (6th Cir. 2005) (citing internal company documents); *FTC v. Cardinal Health, Inc.*, 12 F. Supp. 2d 34, 49 & n.10 (D.D.C. 1998) ("Defendants themselves do not view the other forms of distribution to be viable competitors or substitutes."); *FTC v. Staples, Inc.*, 970 F. Supp. 1066 (D.D.C. 1997) (citing internal documents).

Distinct Prices; Sensitivity to Price Changes. ChromaDex complains that Dr. Cockburn only analyzes "one potential substitute," niacin. Mem. at 9. This argument goes to weight, not admissibility. It also is not true. Dr. Cockburn also considered

pricing of NMN. (Cockburn Ex. A at ¶ 66(iii)). ChromaDex also complains that Dr. Cockburn's analysis of price differentials is not "properly calculated." (Mem. at 10). This is an argument for cross-examination, not admissibility. And, ChromaDex's claim that price differential is of "no import" is also wrong. *Id.* This claim would be news to the Ninth Circuit, which observed in defining a market in one case that "there is a price difference of approximately 300 percent between home tapes and prerecorded music." *Warner*, 742 F.2d at 1163; *see, e.g., Abex*, 420 F.2d at 932 ("metal friction materials are substantially higher in price than organic friction materials").

3. ChromaDex's Remaining Arguments are Baseless

ChromaDex's remaining arguments are easily dispatched.

- ChromaDex claims that Dr. Cockburn is wrong to consider analyses of antitrust enforcement agencies directed to drugs/pharmaceuticals. Mem. at 10. This argument is at best a point for cross-examination, not exclusion. Tellingly, ChromaDex fails to acknowledge that its own expert economist likewise used the drug industry as a comparator. (Sacca Decl. Ex. 1 at ¶ 47 (comparing ChromaDex profits to "Drugs" industry group); *see also* Sacca Decl. Ex. 2 at 149 ("Q: Why did you pick these as comparators?" A: "I think that they're relevant comparators…")).

- ChromaDex criticizes Dr. Cockburn for not performing a cross-price elasticity study. (Mem. at 6). But ChromaDex concedes such a study is not required. *Id.* *See In re Live Concert*, 863 F. Supp. 2d at 984 ("[I]t is usually necessary to consider other factors that can serve as useful surrogates for cross-elasticity data."); *In re Korean Ramen Antitrust Litig.*, 2018 U.S. Dist. LEXIS 69877, at *25 (N.D. Cal. Apr. 24, 2018) ("There is no dispute that Mangum did not perform any cross-elasticity of demand studies or show how the market reacted to SSNIP. But Mangum did consider some of the more significant … *Brown Shoe* practical indicia…"); *Nobody in Particular Presents, Inc. v. Clear Channel Communs., Inc.*, 311 F. Supp. 2d 1048, 1082 (D. Colo. 2004) ("[A] plaintiff may, through sufficient evidence of

other indicia of market definition, define a relevant market without economic study of cross-elasticity of demand…."). Indeed, ChromaDex's own expert opined that all anti-aging supplements are substitutes for NR yet he did not himself undertake to conduct such a study. (Sacca Decl. Ex. 1 at ¶¶ 57-63; Sacca Decl. Ex. 2 at 118-35).

- ChromaDex's claim that Dr. Cockburn did not perform a hypothetical monopolist test is wrong. *See* Mem. at 6. ChromaDex simply ignores Dr. Cockburn's analysis of market entry by additional suppliers and the barriers they faced in the relevant time frame. (Cockburn Ex. A at ¶¶ 108-14). ChromaDex's expert agrees that a hypothetical monopolist test can be conducted in this case by examining the market entry of new NR suppliers. (Sacca Decl. Ex. 1 at ¶¶ 48-51).

B. Dr. Cockburn's Opinions Regarding the Economic Significance of ChromaDex's Conduct are Admissible

ChromaDex's challenge to Dr. Cockburn's opinions regarding the economic significance of ChromaDex's conduct, (Mem. at 11-13), is misplaced. ChromaDex says that Dr. Cockburn is opining about "legal standards" or "legal conclusions" when he opines that ChromaDex expanded the scope of its patent rights from an economic perspective. On the contrary, as Dr. Cockburn's report makes clear, his testimony properly provides the factfinder the economic context in which to assess ChromaDex's conduct.

Dr. Cockburn first describes ChromaDex's business strategy of using its patent rights to increase the strength of its mark. (Cockburn Ex. A at ¶¶ 115-21). Then, based on economic literature, he explains how "brands convey significant market power, visible in price-cost margins higher than would prevail under perfect market competition." (*Id.* at ¶ 128). He continues, describing the advantages brands convey, by discussing how "[b]rands can be a powerful barrier to entry to new products," and how brands can disadvantage new competitive entry. (*Id.* at ¶¶ 129-30). He then explains how an economic appreciation of the durability and impacts of brands differs

from the economic experience with patent monopolies, which are limited in subject matter and scope. (*Id.* at ¶¶ 133-37).

This application of economic analysis to the facts is manifestly within the ambit of admissible expert testimony. It is exactly what experts are for—to assist the trier of fact by applying their expertise to the facts at hand. *See* Fed. R. Evid. 704(a), Advisory Comm.'s Note to 2011 Amendment ("The basic approach to opinions … in these rules is to admit them when helpful to the trier of fact."). ChromaDex's arguments that Dr. Cockburn's opinions must be excluded because they relate to "ultimate issues" for the factfinder was explicitly abolished by the adoption of Federal Rule of Evidence 704(a) more than four decades ago. Rule 704(a) states: "An opinion is not objectionable just because it embraces an ultimate issue."

ChromaDex's arguments invite this Court to make the same reversible error as occurred in *Shad v. Dean Witter Reynolds, Inc.*, 799 F.2d 525 (9th Cir. 1986). In that case, the plaintiff alleged that Defendants had engaged in churning in violation of the Securities Exchange Act of 1934. *Id.* at 526. The plaintiff proffered financial experts to testify "not to the definition of churning, but rather to the significance of various types of transactions" as it related to churning. *Id.* at 527. The district court excluded the experts, reasoning that it would not allow testimony as to whether "this does constitute churning" or "whether churning took place." *Id.* at 528. The Ninth Circuit, citing Rule 704 and other authority, reversed, holding that the district court abused its discretion by refusing to allow plaintiff to present expert testimony on a complex economic issue. *Id.* at 530. This "prevented [plaintiff] from presenting their case… and mandates a new trial." *Id.*

ChromaDex's remaining arguments likewise do not support exclusion. ChromaDex accuses Dr. Cockburn of "hand-select[ing] evidence from the case." This is not a ground for exclusion. *Korean Ramen*, 2018 U.S. LEXIS 69877 at *26 (rejecting *Daubert*, holding opponent's argument that expert "cherry-picked" documents could be explored on cross-examination). Similarly, ChromaDex's

contentions that Dr. Cockburn's opinions are contradicted by other evidence provide no basis for excluding his testimony. *See Dorn v. Burlington N. Santa Fe R.R. Co.*, 397 F.3d 1183, 1196 (9th Cir. 2005) (reversible error for district court to weigh evidence on *Daubert* motion).

C. Dr. Cockburn's Opinions Regarding the Anticompetitive Effects of ChromaDex's Conduct are Admissible

ChromaDex's challenge to Dr. Cockburn's opinions regarding anticompetitive effects, mem. at 13-14, also fails. ChromaDex's first argument, that Dr. Cockburn's opinions are not based on a properly defined market, *id.* at 13, is wrong for the reasons discussed above in Part A.

ChromaDex's alternative argument, that Dr. Cockburn's opinions are not based on economic analysis, *id.*, does not bear scrutiny. ChromaDex's assertion that Dr. Cockburn provides "only a one-sided evidentiary summary," *id.*, is a matter for cross-examination, not exclusion. *See Korean Ramen*, 2018 U.S. LEXIS 69877 at *26. Elysium could make the same complaint about Dr. Heeb's testimony. Nor is there any basis for ChromaDex's attack on Dr. Cockburn's opinion concerning the anticompetitive effects of ChromaDex's success in decreasing brand competition. Mem. at 13. Dr. Cockburn explains in detail the distorting effect that strong brands can have on competition and consumer choice. *See* Cockburn Ex. A at ¶¶ 129-32, 149-52. Further, he describes how ChromaDex's efforts to turn NIAGEN® into a "proprietary eponym" can distort healthy competition, *id.* at ¶¶ 149-55, and he provides an example of how ChromaDex's instructions for customers to "Look for 'Niagen® on the label'" does just that. *Id.* at ¶¶ 155-56. Lastly, he explains how ChromaDex's conduct prevented the healthy adoption of competing brands, *id.* at ¶ 158, and hampered Elysium's ability to invest in innovation, *id.* at ¶ 160. These clearly are admissible expert opinions.

Indeed, ChromaDex offers the same kind of testimony through its expert to show the allegedly procompetitive effects of ChromaDex's ingredient branding

strategy. *See* Sacca Decl. Ex. 1 at ¶¶ 58-66. ChromaDex's *Daubert* motion is a thinly disguised attempt to ensure that Dr. Heeb's opinions stand unrebutted. This Court should not foreordain the battle of the experts through a *Daubert* motion. *See Humetrix v. Gemplus S.C.A.*, 268 F.3d 910, 919 (9th Cir. 2001) ("authority to determine the victor in such a battle of expert witnesses is properly reposed in the [factfinder after trial]") (internal quotation marks and citations omitted).

III. DR. COCKBURN'S DAMAGES OPINIONS ARE RELIABLE AND ADMISSIBLE

Like his patent misuse opinions, Dr. Cockburn's damages opinions are well-reasoned, well-supported, and grounded in a reliable methodology that allows him to present his economic analysis in a manner that will be helpful to a jury. ChromaDex asserts that Dr. Cockburn's lost profits calculations are "speculative" because he presents a range of damages, and disagrees with the merits of his analysis of cGMP damages. These criticisms amount only to a premature cross-examination and improper attacks on Dr. Cockburn's conclusions, neither of which are the proper focus of a *Daubert* motion.

As the Ninth Circuit has explained, "[u]nder *Daubert*, the district judge is a gatekeeper, not a fact finder," and the relevant test "is not the correctness of the expert's conclusions but the soundness of his methodology." *Primiano v. Cook*, 598 F.3d 558, 564-65 (9th Cir. 2010) (citations omitted). To evaluate the admissibility of expert testimony under Federal Rule of Evidence 702, the Ninth Circuit has stated that "the district court is not tasked with deciding whether the expert is right or wrong, just whether his testimony has substance such that it would be helpful to a jury." *Alaska Rent-A-Car, Inc. v. Avis Budget Grp., Inc.*, 738 F.3d 960, 969-970 (9th Cir. 2013). "Basically, the judge is supposed to screen the jury from unreliable nonsense opinions, but not exclude opinions merely because they are impeachable." *Id.* at 969. Moreover, the Ninth Circuit has recognized that "Rule 702 should be applied with a

'liberal thrust' favoring admission." *Messick v. Novartis Pharm. Corp.*, 747 F.3d 1193, 1196 (9th Cir. 2014).

A. Dr. Cockburn's Opinion on Elysium's Lost Profits is Reliable and Based on Sound Methodology

In February 2016, ChromaDex granted Elysium exclusivity over products that combine NR and PT or substantially similar products such as resveratrol (ECF No. 153-04 ¶ 4), yet it enabled other customers to sell products in violation of that exclusivity grant. (LR ¶¶ 3-4)[5]. Dr. Cockburn analyzed sales of third-party combined products by those sellers to whom ChromaDex sold NR in breach of the Exclusivity Provision between the date of the exclusivity grant and the termination of the NR Supply Agreement (Cockburn Ex. A ¶ 181). He then, based on assumptions and factors identified in his report, estimated the portion of the sales that Elysium would have captured if, as provided for under the contract, it had been the only seller of combined product.

Remarkably, ChromaDex's "threshold" complaint is to take issue with Dr. Cockburn's assumption—made by every damages expert in every breach of contract case—that the retaining party's interpretation of the contract is correct. However, as even ChromaDex seems to recognize, "the factual basis of an expert opinion goes to the credibility of the testimony, not the admissibility." *Hangarter v. Provident Life and Acc. Ins. Co.*, 373 F.3d 998, 1017 n.14 (9th Cir. 2004). In order to exclude Dr. Cockburn's opinion, ChromaDex must show that it is "methodologically unreliable, as opposed to simply not credible or even just plain wrong." *See Corning Optical Commc'ns Wireless Ltd. v. Solid, Inc.*, 2015 WL 5655192, at *1 (N.D. Cal. Sept. 24, 2015); *see also Whitewater W. Indus., Ltd. v. Pac. Surf Designs, Inc.*, 2019 WL 2211897, at *11–12 (S.D. Cal. May 22, 2019) (denying *Daubert* motion to exclude

[5] Elysium's and Morris's Statement of Genuine Disputes of Material Facts in Support of its Opposition to ChromaDex's Motion for Partial Summary Judgment Pursuant to Local Rule 56-2 ("LR 56-2").

damages expert's opinions, finding that attacks on expert's conclusions went to weight of testimony not admissibility).

Contrary to ChromaDex's assertions, Dr. Cockburn did not "pick[] his numbers out of thin air," substitute "[e]xperience and intuition… for methodology," or ask anyone to "take his word for" how he got to his result. (Mem. at 15). Instead, his methodology is set forth in his report. First, he started by examining data identifying four combination consumer products combining NR and resveratrol, a product substantially similar to pterostilbene, sold during the relevant period. (Cockburn Ex. A at 63). Of those combination products, Dr. Cockburn conservatively eliminated sales of Thorne Extra Nutrients, because he determined the ratio of NR to resveratrol was too dissimilar from Elysium's own product Basis to assume that Elysium would have captured any of Thorne's sales. *Id.* For each of the remaining products, Dr. Cockburn considered a number of factors specific to each, including marketing channel, price, dosage, and ratio of NR to reservatrol relative to Elysium's product Basis. *Id.* Based on these factors, both qualitative and quantitative, he estimated a range of lost sales for each product. Specifically, Dr. Cockburn concluded that Elysium would have captured between 10% and 90% of sales of a product called Mitboost, between 10% and 75% of sales of a product called "Optimized Resveratrol with NR" and up to 11.25% of a product called ResveraCel. *Id.*

Notably, ChromaDex does not raise any challenge to Dr. Cockburn's methods; indeed, it fails even to acknowledge them. Instead, ChromaDex selectively quotes from and mischaracterizes Dr. Cockburn's testimony and report to create the misimpression that because he used his "knowledge and experience" in conducting his analysis, he relied on nothing else. (Mem. At 15). For example, ChromaDex makes the alarming (and false) claim that Dr. Cockburn "admits that he did not review any data in reaching his conclusions" (*Id.*). For this proposition, they cite to the following question and answer:

Q. …But you didn't crunch any numbers to come to the 75% number?

A. The data are not available to do that kind of calculation. (236:20-23).

The "75% number" refers to Dr. Cockburn's determination that the upper bound of market share that Elysium could have recaptured related to the product Optimized Resveratrol with NR is at most 75%, as opposed to the upper bound of 90% recapture Dr. Cockburn had identified for the previous product discussed, which was Mitoboost. (Cockburn Tr. at 231:9–236:1).

This question and answer are preceded by five pages of testimony by Dr. Cockburn as to why he reached a different conclusion of 75% for the LEF product than he did for Mitoboost. In summary, Dr. Cockburn explained that the LEF product contains a different amount of resveratrol, so his conclusion needed to account for customer preferences, the additional cost for consumers of buying additional resveratrol, and the consumer's potential view of Elysium's Basis as a less substitutable product. (Cockburn Tr. at 231:9–236:1). ChromaDex is free to challenge Dr. Cockburn's assumptions and analysis regarding each of these factors at trial, as they are "testable in the crucible of cross-examination" (Mem. at 15), but there is no basis to exclude his testimony.

To be clear, Dr. Cockburn of course did review data in reaching his conclusions, including among other things the third party purchasing data discussed above, prices negotiated and paid by comparable customers purchasing NR from ChromaDex at the time of the Elysium supply agreement, data depicting ChromaDex's customer-level NR ingredient sales, publicly available retail pricing data for certain dietary supplement products, and ChromaDex's quarterly and annual financial disclosures to the U.S. Securities and Exchange Commission ("SEC")." (Cockburn Ex. A at 3; Appendix C at 5). Notably, by ignoring the process Dr. Cockburn used to evaluate the three combined products – each sold during the

relevant period with similar ingredient ratios – ChromoDex leaves unchallenged Dr. Cockburn's particularized analysis of factors specific to each.

ChromaDex's real complaint is that Dr. Cockburn's report is speculative because it presents a range of damages between $68,355 and $571,981 ("lost profits opinion"). (Mem. at 14; Cockburn Ex. A at 4). But the California Supreme Court has recognized that '[t]he lost profits inquiry is always speculative to some degree." *Saragon*, 50 Cal. 4th at 775; *see also Orazco v. WPV San Jose, LLC*, 36 Cal.App.5th 375 (2019) (affirming jury award based on expert's "approximation" of damages). Contrary to ChromaDex's arguments, Dr. Cockburn's careful analysis provides ample basis for a jury award in the range he presents, given the extensive factual and methodological basis for that range. *See Saragon*, 55 Ca. 4th at 774 ("damages may be computed even if the result reached is an approximation"); *see also Corning*, 2015 WL 5655192 at *1 (holding that despite defendants' challenge to expert's use of "reference range" for a "hypothetical royalty rate," defendants failed to show that the expert's opinions were "methodologically unreliable, as opposed to simply not credible or even just plain wrong"); *see also Brighton Collectibles, Inc. v. Coldwater Creek Inc.*, 2010 WL 3718859, at *10–11 (S.D. Cal. Sept. 20, 2010) (denying *Daubert* motion to exclude expert's lost profits calculations, despite not agreeing with chosen methodology, based on recognition that court was "not the trier of fact").

ChromaDex's demand for "mathematical precision," has been rejected by the Ninth Circuit as simply not possible in lost profits cases. *Humetrix, Inc., v. Gemplus S.C.A.*, 268 F.3d 910, 919 (9th Cir.2001) (recognizing that the amount of lost profits is "necessarily an estimate" that cannot be shown with "mathematical precision.") (citations omitted). Moreover, the Ninth Circuit has found that "[a]s to the reasonableness of the assumptions underlying the experts' lost profit analysis, criticisms of an expert's method of calculation [are] a matter for the jury's consideration in weighing that evidence," and concluded that "[i]t is for the trier of fact to accept or reject this evidence, and this evidence not being inherently

improbable provides a substantial basis for the trial court's award of lost profits." *Id* at 920. (citations omitted).

B. Dr. Cockburn's cGMP Damages Opinion is Reliable and ChromaDex's Criticisms Go to Weight, Not Admissibility

ChromaDex's attacks on Dr. Cockburn's damages estimate relating to its breach of the current good manufacturing provision ("cGMP Provision") similarly fail. If anything, ChromaDex makes even less of an effort to disguise the fact that its beef is with Dr. Cokburn's factual assumptions and conclusions, and not with his methods.

In his Report, Dr. Cockburn details how he determined Elysium's cGMP damages. First, he made the assumption that Elysium would have demanded a lower price had it understood that it was in fact bargaining for product manufactured to a lower standard. He next determined that the appropriate measure of damages is the difference between the actual price paid and the price Elysium would have paid but for ChromaDex's breach, multiplied by the quantity purchased. To arrive at the but-for price, Dr. Cockburn examined prices negotiated and paid by comparable customers purchasing NR from ChromaDex at the time of Elysium's supply agreement, 2014-2016. He then calculated Elysium's damages based on volume of 2,510 kilograms of NR during that timeframe in accordance with his formula, arriving at a total figure of $221,000. (Cockburn Ex. A at 68).

ChromaDex complains of "analytical gaps" in Dr. Cockburn's calculations, alleging he makes unsupported assumptions related to ChromaDex's hypothetical willingness to sell NR and Elysium's purported purchase price from other alternative NR manufacturers. (Mem. at 17). It attacks the average prices Dr. Cockburn used in his analysis and attempts to introduce outside evidence regarding ChromaDex's supply relationship negotiations that are well beyond the scope of a *Daubert* inquiry. (*Id.* at 17-18). It claims that Dr. Cockburn "cherry-picked" his data (Mem. at 18), although it identifies no systemic flaw in his methodology but rather takes issue with

which customers are "comparable" and which sales were included. Each of these arguments goes to whether Dr. Cockburn's analysis is correct, not to the reliability of his methodology, and ChromaDex is improperly asking this Court to be a factfinder rather than a gatekeeper. *See Primiano v. Cook*, 598 F.3d at 564-65. At best, ChromaDex's criticisms of certain tertiary items, either included or excluded from Dr. Cockburn's cGMP damages estimate, go to the weight of his testimony, not its admissibility, and can be properly examined during cross-examination. *See Bergen v. F/V St. Patrick*, 816 F.2d 1345, 1352 n.5 (9th Cir. 1987) *opinion modified on reh'g*, 866 F.2d 318 (9th Cir. 1989) ("The relative weakness or strength of the factual underpinnings of the expert's opinion goes to weight and credibility, rather than admissibility.") (quotations omitted); *see also In re Toyota Motor Corp. Hybrid Brake Mktg., Sales Practices and Prods. Liab. Litig.*, 2012 WL 4904412, at *3 (C.D. Cal. Sept. 20, 2012) (recognizing that whether an expert's "reasonable assumptions are true and whether his opinions should be accepted in part or in their entirety, are issues going to the weight of his testimony and report, and not to their admissibility"); *see also Primiano*, 598 F.3d at 564 ("Shaky but admissible evidence is to be attacked by cross examination, contrary evidence, and attention to the burden of proof, not exclusion.") (citing *Daubert*, 509 U.S. at 594, 596); *Korean Ramen*, 2018 U.S. LEXIS 69877 at *26 (denying *Daubert* motion and noting opponent's argument that expert "cherry-picked" documents could be explored on cross-examination)

Accordingly, Dr. Cockburn's cGMP damages opinion is admissible and ChromaDex's motion to exclude it should be denied.

IV. DR. COCKBURN'S REBUTTAL TESTIMONY IS PROPER AND ADMISSIBLE

Finally, ChromaDex argues that Dr. Cockburn's rebuttal to the Export Report of Lance E. Gunderson ("Gunderson Report") includes improper "legal opinions" or "legal conclusions" and therefore "[t]he opinions in his rebuttal report" should be excluded. (Mem. 19-20). ChromaDex does not, however, identify any particular

opinion or conclusion it believes should be stricken on this basis or why that opinion or conclusion is improper. ChromaDex instead waves toward certain pages of Dr. Cockburn's report and states they echo Elysium's legal brief. Notably, these pages include the "Legal Framework" section, in which Dr. Cockburn lays out what he understands to be the legal background framing his analysis of economic causality (Cockburn Ex. A at 4, 14-15). This legal background cited by Dr. Cockburn merely illustrates how courts have adopted and require the application of economic principles in the calculation of economic damages.

These pages also include Dr. Cockburn's opinion that ChromaDex's own expert report "is a fundamentally flawed recitation of ChoromaDex's legal arguments, unsupported assumptions, and aggregated financial records . . ." (Cockburn Ex. A at 4, 14-15). Because the Gunderson Report is indeed largely a flawed recitation of ChromaDex's legal arguments and aggregated financial records, Dr. Cockburn had no choice but to reference certain legal issues as he identified numerous and ultimately fatal deficiencies in Gunderson's methodology and assumptions. (Cockburn Ex. A at 4). To that end, Dr. Cockburn's references to numerous quantitative and analytical shortcomings in the Gunderson's Report, including with respect to the issues of "causation and apportionment" that ChromaDex identifies in its motion (Mem. at 19), are necessary components of Dr. Cockburn's economic analysis and damages calculations underlying his rebuttal opinions. For example, Dr. Cockburn identifies, as a matter of economics, critical flaws in Gunderson's damages calculations, including that he "failed to even attempt to measure the incremental economic harm or gain caused by the misappropriation; nor has he tried to show the nexus between the alleged bad act and its resulting effect on ChromaDex's actual economic loss or Elysium's (or Morris's) alleged unjust benefit." (ECF No. 246-17 at 34). Likewise, Dr. Cockburn flags critical evidence missing from Gunderson's economic analysis concerning trade secret misappropriation claims, including that "Mr. Gunderson provides no evidence or

analysis connecting these claims to Elysium's actual strategy or performance: no new business or marketing strategy, no evidence of increased sales or market share, no evidence of greater profitability, no evidence of greater ease in attracting investor capital, or a license to the Dartmouth NR patents." (*Id.* at 37).

While for these reasons Dr. Cockburn includes certain legal terms as necessary factors in his economic analysis, his rebuttal opinions remain well within the scope of permissible expert testimony under Federal Rule of Evidence 704(a), which provides that "testimony in the form of an opinion or inference otherwise admissible is not objectionable because it embraces an ultimate issue to be decided by the trier of fact." Fed. R. Evid. 704(a); *Hangarter*, 373 F.3d at 1017 ("a witness may refer to the law in expressing an opinion without that reference rendering the testimony inadmissible").

Nor is Dr. Cockburn's opinion a mere "rehash" of the evidence; it is an economic rebuttal of Gunderson's assumptions, findings, and conclusions. First, Dr. Cockburn analyzes each harm alleged in Gunderson's report 'in light of both the sources, cited in the Gunderson report as well as other documents, data and testimony" to determine whether Gunderson established a causal link between each specific allegation and "any observable impact on and quantifiable loss to ChromaDex and/or gain to Elysium and Mr. Morris." (Cockburn Ex. A at at 22). Second, Dr. Cockburn rebuts Gunderson's measure of damages, pointing out qualitative and quantitative errors and omissions. These range from Gunderson's overall approach to damages to his flawed calculations relating to ChromaDex's claims for unpaid sales invoices [cite to report]; each of these opinions is based on Dr. Cockburn's expert analysis and will assist the jury in its deliberations. *See Alaska Rent-A-Car*, 738 F.3d at 970.

V. CONCLUSION

For the foregoing reasons, ChromaDex's *Daubert* motion should be denied.

Respectfully submitted,

Dated: August 28, 2019

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