IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF PENNSYLVANIA

IN RE: GENERIC PHARMACEUTICALS PRICING ANTITRUST LITIGATION	**MDL NO. 2724** **16-MD-2724** **HON. CYNTHIA M. RUFE**
THIS DOCUMENT RELATES TO: ***Humana Inc. v. Actavis Elizabeth, LLC, et al.***	**No. 18-cv-3299**

MEMORANDUM OPINION

Rufe, J. **July 28, 2026**

In this multidistrict litigation concerning alleged price-fixing of generic drugs, the Court selected Plaintiff Humana Inc.'s 2018 action ("*Humana I*") as the first bellwether case to involve a Direct-Action Plaintiff ("DAP"). This *Humana I* Opinion resolves Defendants' joint motion to exclude the opinions and testimony of Dr. W. David Bradford. In total, Defendants have jointly moved to exclude the opinions and testimony of five of Humana's experts: Dr. W. David Bradford, Dr. William B. Vogt, Dr. Richard G. Frank, Dr. Aaron S. Kesselheim, and Ms. Stacy M. Arruda. Humana in turn seeks to exclude the opinions and testimony of two defense experts: Mr. Khody R. Detwiler and Dr. Bonny Levin. On June 4, 2026, the Court heard argument on the motions to exclude Dr. Bradford, Dr. Vogt, and Dr. Frank. Having carefully studied Dr. Bradford's expert reports, Defendants' rebuttal reports, the parties' briefs, and the evidence and argument presented, the Court now addresses Defendants' joint motion to exclude Dr. Bradford's opinions and testimony.[1]

[1] Rulings on the other six motions, including the motion to exclude the opinions and testimony of Dr. Vogt and Dr. Frank, will be entered by separate Orders and Opinions.

I. BACKGROUND

The Court provides the background relevant to this Opinion.[2] Humana is a health insurer headquartered in Kentucky that "either directly or through its health plan subsidiaries, [insures] and administers health plan benefits for its members and group customers, including self-funded group customers that contract with Humana to administer claims on their behalf and pursue recoveries related to those claims."[3] Defendants are manufacturers of generic pharmaceutical products. Humana claims that it purchased generic drugs manufactured by Defendants that were subject to the unlawful anticompetitive conduct broadly complained of in this MDL. That is, Humana alleges that certain Defendants conspired to unlawfully fix prices and allocate market share for 13 generic drugs (the "Subject Drugs").[4] Humana also avers that, by fixing prices for individual drugs and maintaining "fair share" commitments across drugs, Defendants entered into an overarching conspiracy to restrain trade in the generic drug market.[5]

Humana's claims involve two distinct streams of commerce. First, it brings claims as an indirect purchaser based on insurance payments made on behalf of members who submitted

[2] A fuller discussion of the allegations in the MDL may be found in the Court's Opinions of October 16, 2018, and February 15, 2019. *See In re Generic Pharms. Pricing Antitrust Litig.*, 338 F. Supp. 3d 404, 411–34 (E.D. Pa. 2018); *In re Generic Pharms. Pricing Antitrust Litig.*, 368 F. Supp. 3d 814, 820–27 (E.D. Pa. 2019).

[3] 18-cv-3299, Doc. No. 110 ¶ 48. Unless otherwise noted, document numbers henceforth correspond to filings in the *Humana I* docket.

[4] As pled in its Second Amended Complaint, Humana alleged individual conspiracies as to 21 drugs: acetazolamide, amitriptyline, baclofen, benazepril, clobetasol, clomipramine, desonide, digoxin, divalproex, doxycycline, econazole, fluocinonide, leflunomide, levothyroxine, lidocaine, nystatin, pravastatin, propranolol, theophylline, ursodiol, and verapamil. *See id.* ¶¶ 19–39. At the parties' July 27, 2026 pre-trial conference, Humana represented that it has dismissed with prejudice its claims as to certain drugs to achieve a narrower presentation for trial. The 13 remaining drugs as of this writing are baclofen, benazepril, clobetasol, clomipramine, digoxin, divalproex, doxycycline (delayed release form only), fluocinonide, levothyroxine, lidocaine, pravastatin, propranolol, and theophylline. The expert reports relevant to the pending *Daubert* motions were produced before the July 27, 2026 conference. Those reports refer to 22 drugs, including the drug "Lidocaine/Prilocaine." *See, e.g.*, Expert Report of Amitabh Chandra, Ph.D. ¶ 13 [Doc. No. 475] (hereinafter "*Chandra* 1") (identified as Exhibit 4 to the Declaration at Doc. No. 446-1). When used in the context of the expert reports, the term "Subject Drugs" refers to all 22 drugs.

[5] *See, e.g.,* Doc. No. 110 ¶¶ 261–62.

claims under their prescription drug coverage.[6] Second, it presses claims as a direct purchaser based on the transactions of its subsidiary, Humana Pharmacy, Inc, which purportedly purchased generic drugs directly from Defendants for distribution to plan members on a mail-order and retail pharmacy basis.[7]

The parties offer expert opinions on a range of issues, including collusion, damages, and the functioning of the generic drug market. They have in turn filed motions to exclude expert testimony under Federal Rule of Evidence 702.[8] On June 4, 2026, the Court held hearings on the subset of motions deemed essential to summary judgment issues, namely, Defendants' motions to exclude the testimony of Dr. W. David Bradford, Dr. William B. Vogt, and Dr. Richard G. Frank.[9] At the hearings, the parties reserved all of their time for argument, declining to present live testimony. The arguments referred to the experts' reports, deposition transcripts, and, where relevant, the video-recorded depositions themselves.

II. LEGAL STANDARD

The admissibility of expert testimony is governed by Federal Rule of Evidence 702 as well as *Daubert v. Merrell Dow Pharmaceuticals, Inc.*[10] and its progeny. Rule 702 provides that:

> [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 the proponent demonstrates to the court that it is more likely than not that:
>
> (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;

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[6] *See Chandra* 1 ¶ 14 (distinguishing between Humana's indirect and direct purchases); *see also* Expert Report of Professor William B. Vogt, Ph.D ¶ 66 [Doc. No. 475]. Dr. Vogt's opening report is identified as Exhibit 1 to the Declaration at Doc. No. 446-1.

[7] *E.g.*, Doc. No. 110 ¶¶ 761–71, 805–15, 849–59.

[8] Doc. Nos. 439, 445, 446, 449, 450, 459, 464.

[9] Doc. Nos. 439, 445, 446.

[10] 509 U.S. 579 (1993).

> (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's opinion reflects a reliable application of the principles and methods to the facts of the case.

In applying Rule 702, district courts exercise a "rigorous gatekeeping function"[11] to "ensure that any and all scientific testimony or evidence admitted is not only relevant, but reliable."[12] The Third Circuit requires the proponent of expert testimony under Rule 702 to prove by a preponderance of the evidence that (1) the expert is qualified; (2) the expert's testimony is reliable and about matters requiring scientific, technical, or specialized knowledge; and (3) the expert's testimony will assist the trier of fact.[13]

In simple terms, there are three restrictions: qualifications, reliability, and fit.[14] To satisfy the qualification prong, the proffered expert must possess specialized expertise.[15] This criterion is nebulous, as "a broad range of knowledge, skills, and training qualify an expert."[16] Next, to be reliable, expert testimony "must be based on the 'methods and procedures of science' rather than on 'subjective belief or unsupported speculation.' "[17] An expert must rely upon good grounds for his or her opinions, but not necessarily the best grounds or unflawed methods.[18] In evaluating

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[11] *Elcock v. Kmart Corp.*, 233 F.3d 734, 744 (3d Cir. 2000).

[12] *Gen. Elec. Co. v. Joiner*, 522 U.S. 136, 142 (1997) (quoting *Daubert*, 509 U.S. at 589).

[13] *See In re Generic Pharms. Pricing Antitrust Litig.*, No. 16-md-2724, 2024 WL 4980784, at *3 (E.D. Pa. Dec. 3, 2024) (citing *Pineda v. Ford Motor Co.,* 520 F.3d 237, 244 (3d Cir. 2008); *Cohen v. Cohen*, 125 F.4th 454, 460 (3d Cir. 2025)).

[14] *Cohen*, 125 F.4th at 460.

[15] *Schneider ex rel. Est. of Schneider v. Fried*, 320 F.3d 396, 404 (3d Cir. 2003).

[16] *Id.* (quoting *In re Paoli R.R. Yard PCB Litig. (Paoli II)*, 35 F.3d 717, 741 (3d Cir. 1994)).

[17] *Paoli II*, 35 F.3d at 742 (quoting *Daubert*, 509 U.S. at 590).

[18] *See In re Generic Pharms. Pricing Antitrust Litig.*, 2024 WL 4980784, at *4 (E.D. Pa. Dec. 3, 2024) (citing *Holbrook v. Lykes Bros. S.S. Co.*, 80 F.3d 777, 784 (3d Cir. 1996); *Paoli II*, 35 F.3d at 744–45).

reliability, courts in the Third Circuit consider the following non-exhaustive factors enunciated in *Daubert* and *United States v. Downing*[19]:

> (1) whether a method consists of a testable hypothesis; (2) whether the method has been subject to peer review; (3) the known or potential rate of error; (4) the existence and maintenance of standards controlling the technique's operation; (5) whether the method is generally accepted; (6) the relationship of the technique to methods which have been established to be reliable; (7) the qualifications of the expert witness testifying based on the methodology; and (8) the non-judicial uses to which the method has been put.[20]

The "test of reliability is 'flexible,' " with the factors' relevance depending "on the nature of the issue, the expert's particular expertise, and the subject of his testimony."[21] Finally, to establish "fit," the expert testimony must assist the trier of fact by supplying a "scientific connection to the pertinent inquiry."[22] The "fit" standard "goes primarily to relevance"[23] and demonstrates that "even if an expert's proposed testimony constitutes scientific knowledge, his or her testimony will be excluded if it is not scientific knowledge *for purposes of the case*."[24]

Aside from these criteria, Defendants note that the 2023 amendment to Rule 702 resulted in two modifications. First, the amendment clarified that courts apply a preponderance of the evidence standard when assessing questions of admissibility under Rule 702.[25] Second, the amendment emphasized that an expert opinion must "reflect a reliable application of the principles and methods to the facts of the case."[26]

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[19] 753 F.2d 1224 (3d Cir. 1985).

[20] *Pineda*, 520 F.3d at 247–48 (citing *Paoli II*, 35 F.3d at 742 n.8).

[21] *Kumho Tire Co., Ltd. v. Carmichael*, 526 U.S. 137, 141, 150 (1999).

[22] *Schneider*, 320 F.3d at 404 (quoting *Daubert*, 509 U.S. at 591–92).

[23] *Daubert*, 509 U.S. at 591.

[24] *Paoli II*, 35 F.3d at 743.

[25] Fed. R. Evid. 702 advisory committee's notes to 2023 amendment.

[26] *Id.*

III. DISCUSSION

Humana retained Dr. W. David Bradford, a university professor with extensive health economics research experience, to evaluate whether "Defendants' conduct relating to the pricing, marketing, and sale of the [Subject Drugs] is indicative of collusion and/or agreement, as opposed to independent decisions, oligopolistic pricing or other market factors that would not be indicative of collusion or agreement."[27]

To complete this assignment, Dr. Bradford performed a multi-part analysis that, broadly speaking, consists of four steps. At Step 1, Dr. Bradford conducted a "market power" study on the premise that market participants who dominate the market's supply and stand to profit from price increases (i.e., participants with "market power") are more capable of illegally disrupting the market to their benefit.[28] In doing so, he found that Defendants had substantial market power because their price hikes, ranging from 44% to 2,539%, enhanced profitability and because their market shares for most Subject Drugs tended to surpass 75% in the alleged collusion period.[29] At Step 2, Dr. Bradford studied price trends for the Subject Drugs and found that the magnitude and timing of the price increases aligned with that of a collusive market.[30] At Step 3, Dr. Bradford ruled out alternative explanations of the price increases, such as supply shortages, by analyzing public data and literature detailing how such phenomena manifest in a firm's pricing.[31] Finally, at Step 4, Dr. Bradford reviewed the discovery record, finding that the price upticks were

[27] Corrected Expert Report of Professor W. David Bradford, Ph.D. ¶ 1–3, 6 [Doc. No. 471] (hereinafter "*Bradford* 1"). Dr. Bradford's opening report is identified as Exhibit 2 to the Declaration at Doc. No. 445-1. Defendants do not challenge his qualifications.

[28] *Id.* § 4.

[29] *Id.*

[30] *Id.* § 5.4.

[31] *Id.* § 5.5.

accompanied by conduct consistent with unlawful collusion, such as communications between defendants, sharing of price information, and market share concessions.[32] Apart from these steps, Dr. Bradford considered factors that "facilitate collusion," that is: "high concentration; multimarket contacts between suppliers; high barriers to entry; product homogeneity; inelastic and stable demand; and price transparency."[33] He found that each of these factors was satisfied, "lend[ing] support to an inference of collusion between suppliers operating in these markets."[34]

From his analysis, Dr. Bradford concluded that Defendants had the "ability and incentive . . . to act in concert," that the sharp price increases "are atypical of behavior in a competitive market," and that "Defendants took actions that would have been against their own self-interest unless a collusive agreement was in place."[35] He accordingly opined that "Defendants' conduct related to the pricing, marketing, and sale of the Subject Drugs is indicative of collusion and/or agreement, as opposed to independent decisions, oligopolistic pricing or other market factors."[36]

Defendants take issue with several aspects of Dr. Bradford's analysis. Among their principal arguments are that Dr. Bradford's purportedly one-sided analysis does not support his two-sided conclusion, that his analyses at Steps 1 through 3 were methodologically flawed, and that his discovery review at Step 4 was based on a skewed sample and not within his expertise.[37] Defendants also complain that Dr. Bradford used arbitrary start and end dates for the collusion

[32] *Id.* § 5.6.

[33] *Id.* ¶ 75.

[34] *Id.* ¶ 97.

[35] *Id.* ¶ 12.

[36] *Id.* ¶ 13.

[37] Doc. No. 471 at 11–19, 20–24.

period and that he did not apply economic factors or scrutinize market dynamics on a defendant-by-defendant basis.[38] These arguments are considered below.

A. Steps 1 through 4

Starting with the market power analysis at Step 1, Defendants fault Dr. Bradford for relying on tables and charts that were underinclusive of brand-name manufacturers but overinclusive of Defendants.[39] For example, they note that Dr. Bradford counted Actavis, Glenmark, Mylan, Par/Endo, and Sun among seven Theophylline Defendants even though Humana did not accuse those defendants of wrongdoing on that drug.[40] The Court does not see this as a basis for exclusion. An expert need only have "good grounds" for their testimony, assuring their opinions are rooted in "science rather than 'subjective belief or unsupported speculation.' "[41] Consistent with academic literature,[42] Dr. Bradford premised his market power analysis on two sources of evidence: (1) direct evidence, meaning that Defendants found the sharp price increases profitable; and (2) indirect evidence, based on Defendants' dominant market shares for each drug.[43] Defendants do not challenge Dr. Bradford's direct evidence review. As for his indirect evidence review, their criticism that his charts were overinclusive of Defendants and underinclusive of brand-name suppliers is overstated. On one hand, Dr. Bradford's exclusion of brand-name drugs follows from a well-accepted division between

[38] *Id.* at 19–20, 24–25.

[39] Doc. No. 471 at 15–16.

[40] *Id.* at 15.

[41] *Holbrook*, 80 F.3d at 784 (quoting *Daubert*, 509 U.S. at 590).

[42] William M. Landes & Richard A. Posner, *Market Power in Antitrust Cases*, 94 Harv. L. Rev. 937, 937–39 (1981). According to Landes and Posner, a "simple economic meaning of the term 'market power' is the ability to set price above marginal cost." *Id.* at 939. They cite non-legal publications explaining the economic and mathematical origins of this concept. *See, e.g.*, F. Scherer, *Industrial Market Structure and Economic Performance* 56 (2d ed. 1980); A.P. Lerner, *The Concept of Monopoly and the Measurement of Monopoly Power*, 1 Rev. Econ. Studs. 157 (1934).

[43] *Bradford* 1 ¶¶ 39–65.

branded and generic markets.[44] On the other, since Humana's overarching conspiracy allegation names all Defendants, reasonable experts could dispute whether aggregating market shares for all Defendants is helpful to portraying their collective capabilities and incentives.[45] Dr. Bradford's market power analysis thus possesses the requisite indicia of reliability and fit. Defendants may renew their points of contention on cross-examination.[46]

The Court reaches a similar conclusion for Dr. Bradford's price trends analysis at Step 2. There, Defendants argue that Dr. Bradford's methodology was unreliable because he used market-wide Average Sale Prices ("ASPs") and plotted prices by molecule, not form or strength.[47] The Court disagrees. Dr. Bradford's price-trends technique is testable and well documented in non-judicial fields,[48] and his use of average pricing does not negate this. The Third Circuit has cautioned that use of average pricing data, "absent a rigorous analysis," is insufficient to establish that individuals' claims were capable of common proof.[49] But that holding was tailored to class certification, where the pitfalls of averaging weigh heavily due to its

[44] *See id.* ¶¶ 15, 28–30 (distinguishing generic drugs from "branded" drugs, which result from intensive research and development, benefit from exclusivity periods, and command brand loyalty).

[45] *Cf. In re Mushroom Direct Purchaser Antitrust Litig.*, No. 06-0620, 2015 WL 5775600, at *3 (E.D. Pa. Aug. 5, 2015) (declining to exclude expert and noting that economics experts often testify on "matters in which reasonable experts may differ" (internal quotations omitted)).

[46] Defendants also argue that even if they do have significant market power, such a notion "merely restates oligopoly economics." Doc. No. 471 at 15 n.3. The Court views this as a relevance argument and finds it unpersuasive. The market power analysis is relevant as a precursor to Dr. Bradford's later analysis and because it indicates that conditions associated with unlawful collusion, but not with other explanations like supply shocks, were present.

[47] Doc. No. 471 at 16–17. Consistent with prior rulings, the Court rejects Defendants' separate argument that Dr. Bradford's use of IQVIA data is a ground for exclusion. *See In re Generic Pharms. Pricing Antitrust Litig*., No. 16-md-2724, 2024 WL 4989070, at *17 & n.132 (E.D. Pa. Dec. 5, 2024) (expert's "use of IQVIA data is well-supported and common in the pharmaceutical industry" (citing *In re Actiq Sales & Mktg. Pracs. Litig.*, No. 07-4492, 2014 WL 3572932, at *10 (E.D. Pa. July 21, 2014))).

[48] *See* Amanda Starc & Thomas G. Wollman, *Does Entry Remedy Collusion? Evidence from the Generic Prescription Drug Cartel*, 115 Am. Econ. Rev. 1400, 1411 (2025) (studying the evolution of drug prices in a generic drug cartel using the "average log price[s] of the cartelized and uncartelized drugs").

[49] *In re Lamictal Direct Purchaser Antitrust Litig.*, 957 F.3d 184, 193–94 (3d Cir. 2020).

tendency to mask individual injury.[50] Dr. Bradford's use of market-wide averaging in this DAP action does not mask individualized dynamics—those particularities are considered at Step 4. To the contrary, his reliance on averaging tracks literature and serves the permissible function of establishing "whether certain conduct is indicative of collusion."[51]

Dr. Bradford's molecule-level analysis also passes muster. As he explains, while some studies examine generic drug pricing at the form-and-strength level, others examine it at the molecule level.[52] That foundation suffices for purposes of *Daubert*, particularly since Dr. Bradford updated his analysis to account for differences in form and since most drugs in Humana's complaint were identified by molecule to begin with.[53] While defense expert Dr. Crémieux notes that manufacturers differ with respect to the forms and strengths they produce and that different forms and strengths are not substitutable,[54] the jury is the proper arbiter of his disagreement with Dr. Bradford.[55]

At Step 3, Defendants question Dr. Bradford's consideration of alternative explanations of the elevated pricing. They focus largely on supply shocks,[56] insisting that his review of data from the Food and Drug Administration ("FDA") and University of Utah ignored a host of

[50] *Id.*; *see Gates v. Rohm & Haas Co.*, 655 F.3d 255, 266 (3d Cir. 2011) ("Averages or community-wide estimations would not be probative of any individual's claim because any one class member may have an exposure level well above or below the average.").

[51] *In re Processed Egg Prods. Antitrust Litig.*, 81 F. Supp. 3d 412, 420 (E.D. Pa. 2015).

[52] Expert Rebuttal Report of Professor W. David Bradford ¶¶ 88–89 [Doc. No. 471] (hereinafter "*Bradford* 2"). Dr. Bradford's rebuttal report is identified as Exhibit 1 to the Declaration at Doc. No. 445-1; *see* Robert Clark et al., *Collusion in the US Generic Drug Industry*, Int'l J. Indus. Org., Dec. 2022, at 11–12 (2022).

[53] *See Bradford* 2 ¶¶ 89–92 (price-trends analysis at the molecule-form level).

[54] Expert Report of Pierre-Yves Crémieux, Ph.D. ¶¶ 121–22 [Doc. No. 471] (hereinafter "*Crémieux*"). Dr. Crémieux's report is identified as Exhibit 8 to the Declaration at Doc. No. 445-1.

[55] *See In re Generics Pharms. Pricing Antitrust Litig.*, 2024 WL 4980784, at *8 (E.D. Pa. Dec. 3, 2024).

[56] Defendants also repeat their argument attacking Dr. Bradford's use of average market-wide pricing, Doc. No. 471 at 18, which, for the reasons already explained, the Court does not find convincing.

record evidence detailing supply disruptions with important implications for pricing.[57] They also argue that Dr. Bradford's review of the public databases was selective.[58] The Court finds these concerns to be misplaced. True, Dr. Bradford's review had holes: Dr. Crémieux and Dr. Gilbert identify disruptions affecting clobetasol, doxycycline, digoxin, leflunomide, lidocaine-prilocaine, and verapamil,[59] and a Humana representative acknowledged an import ban affecting divalproex around 2013.[60] But the thrust of Dr. Bradford's analysis was not that supply shocks did not happen; it was that they cannot explain the upheavals in pricing:

> [P]rice increases that stem from drug input shortages are usually of a much lower magnitude than the observed price changes in this matter. In Bradford 1, I cited to literature that calculate[s] the resulting price changes from a shortage, and these studies find that supply shortages caused about a 10-15% subsequent increase in price. This does not equate to the scale of price increases that I have reviewed.[61]

Along these lines, Dr. Bradford observed that the price hikes on 20 of the 22 Subject Drugs exceeded 100%, with most increases surpassing 300%.[62] Regardless of whether Dr. Bradford accounted for most of the supply constraints, his methodology for ruling out those phenomena is

[57] Doc. No. 471 at 18. "Supply disruptions," as Defendants explain, can include "drug/[Active Pharmaceutical Ingredient ("API")] shortages, import bans and FDA warning letters, market changes, quality/manufacturing issues, recalls, discontinuations, capacity constraints, [and] cost increases." *Id.*

[58] *Id.* at 18–19.

[59] *Crémieux* ¶ 88; Expert Report of Professor Richard J. Gilbert, Ph.D. ¶ 123 [Doc. No. 471] (hereinafter "*Gilbert*"). Dr. Gilbert's report is identified as Exhibit 9 to the Declaration at Doc. No. 445-1.

[60] Bank Decl. Ex. 19, Stein Depo. Tr. 359:9–24 [Doc. No. 471].

[61] *Bradford* 2 ¶ 47.

[62] *Bradford* 1 ¶ 40. He also explains that API shortages, unlike shortages in the drug itself, tend to result in a less significant pass-through of costs where, as here, the shortage is isolated to individual firms. *Bradford* 2 ¶ 51 & n.90. Accounting for Humana's dismissal of claims for all but 13 drugs on July 27, 2026, Dr. Bradford's report indicates that all 13 of those drugs experienced price increases of greater than 100%, with 5 experiencing an increase of over 300%. *Bradford* 1 ¶ 40.

based on peer-reviewed studies conveying a falsifiable framework.[63] Humana thereby showed by a preponderance of the evidence that his analysis was reliable.[64]

Finally, at Step 4, Defendants say Dr. Bradford's discovery review should be excluded because he did not employ economic expertise[65] and, in any event, because the evidence he examined was unreliable and selectively examined.[66]

For context, economic experts are regularly permitted to opine whether conduct is "indicative of collusion" or "consistent with" collusion—with "collusion" meaning an illegal conspiracy.[67] Further, "an economic expert may permissibly testify as to whether certain conduct is consistent with . . . an entity or individual's self-interest" and may testify to "put events into an economic context."[68] In rendering such opinions, the expert may review documentary evidence,

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[63] *See Bradford* 1 ¶ 162 (citing literature associating supply shortages with rises in drug costs between 10.9% and 20%).

[64] Defendants' reliance on *Cohen v. Cohen*, 125 F.4th 454 (3d Cir. 2025), is misplaced. They cite *Cohen* to address fit, arguing that Dr. Bradford's testimony is not "sufficiently tied to the facts of the case" because of supply disruptions in the record that he ignored. Doc. No. 471 at 18. But the facts of *Cohen* were different. There, the Third Circuit determined that the district court abused its discretion by not excluding an expert on "free recall" memories because the alleged victim's memory stemmed from "emotional sensations and physical sensations" that "are not emblematic of 'free recall.' " 125 F.4th at 464. Likewise, the court found the expert's theory of memory repression inapplicable, as it was premised on suppositions that the alleged victim flatly contradicted. *Id.* In short, the expert's theories in *Cohen* had no application to the facts emanating from the alleged victim's testimony. Dr. Bradford's analysis, by contrast, continues to apply with equal force even though he failed to discuss supply disruptions in this record. Indeed, his analysis suggests why, despite that record evidence, supply disruptions are not a worthy explanation for high-magnitude price increases.

[65] Doc. No. 471 at 20–21.

[66] *Id.* at 21–24.

[67] *Processed Egg Prods.*, 81 F. Supp. 3d at 420; *In re Urethane Antitrust Litig.*, No. 04-1616-JWL, 2012 WL 6681783, at *3 (D. Kan. Dec. 21, 2012) (declining to exclude an opinion that alleged conspirators' conduct "is consistent with the existence of an agreement to fix prices"), *aff'd* 768 F.3d 1245 (10th Cir. 2014) (upholding jury verdict); *In re Titanium Dioxide Antitrust Litig.,* No. RDB-10-0318, 2013 WL 1855980, at *4 (D. Md. May 1, 2013) ("Courts regularly admit expert testimony regarding 'whether conduct is indicative of collusion.' " (quoting *In re Polypropylene Carpet Antitrust Litig.,* 93 F. Supp. 2d 1348, 1355 (N.D. Ga. 2000))); *In re Rail Freight Fuel Surcharge Antitrust Litig.*, 292 F. Supp. 3d 14, 52 (D.D.C. 2017) ("[E]conomic experts may testify as to whether certain conduct is indicative of collusion or consistent with a conspiracy." (internal quotations and citation omitted)).

[68] *Processed Egg Prods.*, 81 F. Supp. 3d at 424; *Urethane*, 2012 WL 6681783, at *3. Discerning whether an action is a rational response to scarcity is at the core of economic expertise. *Id.* (citing *Mid-State Fertilizer Co. v. Exchange Nat'l Bank*, 877 F.2d 1333, 1340 (7th Cir. 1989) ("Economics is the study of rational, self-interested accommodation to scarcity.")).

provided he adheres to recognized limits. Namely, an expert's "examination of the factual record is necessary. . . to confirm that the stories drawn from the data and from the factual record are consistent,"[69] but is not admissible where he or she "simply reads and interprets evidence of collusion as any juror might, or where an economist infers intent to collude from mere documentary evidence, unrelated to his or her expertise."[70]

The range of evidence that an expert may analyze to confirm the suitability of his economic models is broad. In *Processed Egg Products*, the court held that an economist used expertise when reviewing emails, newsletters, and other communications showing that an entity pursued the mass export of eggs to inflate domestic prices.[71] In EPPs' class bellwether, this Court likewise found that Dr. Lamb's review of depositions, competitors' communications, and exchange of confidential business information withstood scrutiny under *Daubert*.[72] And in DPPs' class bellwether, this Court held analogously.[73]

The Court rests on the same conclusion here. *First*, Dr. Bradford's record review was within the scope of his expertise, as he undertook a similar review to the experts above. Dr. Bradford analyzed emails and calls between competitors, exchanges of pricing information, scores of depositions, and internal notes and customer lists among other documentary evidence.[74]

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[69] *Processed Egg Prods.*, 81 F.3d at 424.

[70] *Rail Freight*, 292 F. Supp. at 53 (quoting *Processed Egg Prods.*, 81 F. Supp. 3d at 421); *City of Tuscaloosa v. Harcros Chems., Inc.*, 158 F.3d 548, 565 (11th Cir. 1998).

[71] *Processed Egg Prods.*, 81 F. Supp. 3d at 423–24.

[72] *See In re Generic Pharms. Pricing Antitrust Litig.*, 2024 WL 4980784, at *19–21 (E.D. Pa. Dec. 3, 2024).

[73] *See In re Generic Pharms. Pricing Antitrust Litig.*, 2024 WL 4989070, at *14–15 (E.D. Pa. Dec. 5, 2024).

[74] *See Bradford* 1 ¶¶ 198, 220, 331, 333, 345. He provided a drug-by-drug synopsis of what he reviewed. Regarding baclofen, for example, Dr. Bradford analyzed calls, texts, and Facebook Messenger communications between Lannett and Teva representatives while Lannett was entering the market, as well as evidence showing that Teva declined to compete for a customer that "had been approached by a new entrant (presumably Lannett)." *Id.* ¶¶ 190–92. For propranolol, Dr. Bradford examined communications between Breckenridge and Actavis representatives in late 2013, including just after Breckenridge announced a price increase and on the same day as when Actavis announced its price increase. *Id.* ¶ 399. He noted that after the price increases, Breckenridge's representative stated, "we are happy with our market share and don't want to disrupt the applecart," even though Actavis's pricing "is way

Based on this review, he summarized, "Overall, I found that there is strong alignment between this discovery record and my economic findings indicating collusion in the supply of the Subject Drugs."[75] That collusion concerned the industry and individual drugs alike.[76] Dr. Bradford also notes that Defendants acted contrary to their competitive interests by declining to bid on contracts, disclosing internal pricing, and conceding market share.[77] From this, it follows that Dr. Bradford (1) conducted his record review to confirm alignment between the record and his economic understandings; (2) observed that Defendants acted inconsistently with rational self-interest; and (3) provided economic context that will assist a jury. The Court finds that he deployed economic expertise.[78]

Second, Dr. Bradford's record review was reliable and fit this case. Contrary to Defendants' argument, consideration of non-content phone records and trade show attendance did not taint his analysis. To support their point, Defendants rely on the proposition from *In re Chocolate Confectionary Antitrust Litigation* that "sporadic communications among individuals . . . are insufficient to create a reasonable inference of conspiracy."[79] But *Chocolate* was a summary judgment decision. Moreover, even if its logic applied to *Daubert*, Dr. Bradford "cites evidence of more than 'sporadic' communications in his report."[80] Many of the communications

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higher than where we are." *Id.* As to benazepril/hydrochlorothiazide, Dr. Bradford observed a Sandoz employee's statement that Mylan and Sandoz "discussed Mylan's intent to take a price increase," and calls between Mylan and Sandoz representatives on the day that Mylan approved a price increase. *Id.* ¶ 194. Concerning digoxin, Dr. Bradford studied communication between Lannett and Impax in a month when Lannett raised pricing, followed by Impax's pricing increase six days later. *Id.* ¶¶ 260–61. And for clomipramine, Dr. Bradford noted a Mylan list with the notation for clomipramine, "Taro price increase item," though Taro had not yet raised prices. *Id.* ¶ 220.

[75] *Bradford* 1 ¶ 176.

[76] *Id.* ¶¶ 177–419 (individual drugs); *id.* ¶¶ 420–26 (overarching conspiracy).

[77] *E.g.*, *Bradford* 1 ¶ 399 (Breckenridge hesitant to compete); *id.* ¶ 356 (sharing of pricing between Fougera and Perrigo); *id.* ¶ 394 (Teva relinquishing market share to Heritage).

[78] *Processed Egg Prods.*, 81 F. Supp. 3d at 425; *Rail Freight*, 292 F. Supp. 3d at 53.

[79] 801 F.3d 383, 409 (3d Cir. 2015); Doc. No. 471 at 22.

[80] *In re Generic Pharms. Pricing Antitrust Litig.*, 2024 WL 4980784, at *22 (E.D. Pa. Dec. 3, 2024).

he cites are clustered around pricing decisions or actions to secure or concede market share.[81] Further still, he cites fact witness testimony, emails, public notices, and internal documents revealing conduct that he found incompatible with a competitive market.[82] Dr. Bradford's confirmation from the record that Defendants' actions were consistent with illegal collusion is accordingly based on "good grounds" and helpful to the trier of fact.

Although Defendants criticize Dr. Bradford for omitting an analysis of contradictory evidence, that omission is not so grave as to render his review unreliable. When faced with a voluminous record, an expert's failure to consider contradictory evidence does not call for exclusion, but instead goes to the "weight of [the expert's] testimony."[83] The scope of discovery in *Humana I* is immense, with estimates of tens of millions of documents.[84] Dr. Bradford cited several hundred documents that confirm his opinion that the Defendants' actions were consistent with collusion and contrary to competitive interests. He also coordinated with Fideres Partners LLC[85] to search the record for "obvious examples that would explain the [price increases] other than collusion."[86] And while the Defendants point to a few cooperators who did not recall or rejected the existence or knowledge of an overarching conspiracy, Dr. Bradford explained that these instances did not dispel his view that there existed evidence consistent with "collusion"—a term used at Step 4 to mean "overt" or "express" collusion.[87]

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[81] *E.g.*, *Bradford* 1 ¶¶ 325–26, 350, 389–92.

[82] *See generally id.* ¶¶ 174–476.

[83] *Processed Egg Prods.*, 81 F. Supp. 3d at 425; *ZF Meritor*, 696 F.3d 254, 290 (3d Cir. 2012).

[84] *See, e.g.*, Bank Decl. Ex. 4, Bradford Depo. Tr. 459:9–16 [Doc. No. 471].

[85] Fideres Partners LLC is an economic consulting firm that contributed to Dr. Bradford's expert report by providing supplemental research and analysis, which included a review of record evidence in this case. Bank Decl. Ex. 4, Bradford Depo. Tr. 103:21–105:23 [Doc. No. 471]; *Bradford* 1 ¶ 5.

[86] *Id.* 69:19–25.

[87] Bank Decl. Ex. 4, Bradford Depo. Tr 447:23–448:2, 452:11–15. Dr. Bradford uses the term "collusion" throughout his report. While he first equivocated on whether he meant "tacit collusion" or "express collusion," *id.* at 20:10–12, 25:24–26:1, his deposition makes clear that, in referring to "collusion" at the Step 4 documentary review,

As in the class bellwethers, Defendants continue to argue that Dr. Bradford's analysis is similar to that which this Court rejected in *In re Zoloft (Sertraline Hydrochloride) Product Liability Litigation*.[88] In *Zoloft*, a products liability case involving a proffered expert on causation, the expert ignored scientific research, including some of her own peer-reviewed studies, that may have greatly affected the outcome of her methodology.[89] Here however, Defendants discuss contradictions originating from the record, not scientific evidence. Further, Dr. Bradford "reviewed an abundance of record evidence on which he forms his opinions[,] and [t]he evidence that he does not include does not materially affect his findings."[90]

In sum, Dr. Bradford took adequate steps to review a capacious record given the nature of his assignment. This was enough to make his analysis reliable. For these reasons, the Court will not exclude Dr. Bradford's analysis in Steps 1 to 4.

B. Comparative Conclusion

Separate from their criticism of Dr. Bradford's analysis at each Step, Defendants challenge his comparative conclusion. They argue that by concluding Defendants' conduct indicated unlawful collusion *as opposed to* oligopolistic pricing, Dr. Bradford arrived at a two-sided conclusion that was untethered from a purportedly one-sided analysis.[91] According to Defendants, Dr. Bradford did not differentiate explicit collusion and oligopolistic competition at Steps 1 through 3 and, to the extent he did at Step 4, that analysis was plagued by

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he meant "express collusion" or "overt collusion" (i.e., conspiracy). *See id.* at 20:5–10, 69:7–12, 245:2–6, 442:20–25.

[88] 26 F. Supp. 3d 449 (E.D. Pa. 2014).

[89] *Id.* at 456.

[90] *In re Generic Pharms. Pricing Antitrust Litig.*, 2024 WL 4980784, at *21 (E.D. Pa. Dec. 3, 2024).

[91] Doc. No. 471 at 11–14.

cherry-picking.[92] For authority, they cite the Third Circuit's decisions in *Chocolate*[93] and *Valspar Corporation v. E.I. Du Pont De Nemours & Co.*,[94] and an Eleventh Circuit case, *Williamson Oil Co. v. Philip Morris USA*.[95] Defendants also contend that Dr. Bradford should be precluded from elevating one explanation for price increases over another because he did not opine on causation.[96]

Before addressing whether Dr. Bradford differentiated between overt collusion and oligopolistic competition, the Court first concludes that, at Step 4, he offered a basis for distinguishing lawful and unlawful conduct. As noted above, Dr. Bradford studied a broad range of communications, public notices, cooperator testimony, and internal documents at Step 4, indicating that the Defendants adopted "fair share" agreements, exchanged pricing information, conceded market share, and tanked bidding opportunities.[97] Further, although non-content phone records offer little insight alone, the timing of those calls relative to the price increases also raised an inference of conspiracy.[98] Defendants repeat their argument that Dr. Bradford's study of the record ignored contrary evidence. But, as discussed, Dr. Bradford conducted a reasonably tailored review given millions of documents. Further, he explained that isolated instances of cooperators denying a pervasive conspiracy would not have undermined his conclusion that the record was holistically indicative of an overarching conspiracy.

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[92] *Id.* at 12–13.

[93] 801 F.3d 383, 397 (3d Cir. 2015).

[94] 873 F.3d 185, 191 (3d Cir. 2017).

[95] 346 F.3d 1287, 1322–23 (11th Cir. 2003).

[96] *Id.* at 14.

[97] *See, e.g.*, *Bradford* 1 ¶¶ 180, 194, 220, 423 & n.694, 425 & n.700, 426 & n.703.

[98] *Connecticut v. Sandoz*, 20-cv-802, 2025 WL 3226616, at *3 (D. Conn. Nov. 19, 2025) ("A price increase in an oligopoly is not by itself significant under antitrust law; but a price increase immediately following communications between oligopolists is.").

The issue, then, is whether Dr. Bradford's basis for distinguishing an overtly collusive market from a competitive one supports his conclusion about collusion "as opposed to . . . *oligopolistic pricing*."[99] The Court finds that it does. To the extent Defendants say there is too great an analytical gap,[100] that argument is belied by Dr. Bradford's rebuttal report. There, he explained that the skyrocketing prices and documentary evidence were inconsistent with competitive oligopolistic paradigms, whether spoken of as "conscious parallelism" or "price leadership."[101] As this Court held, an expert's review of suspect communications between rivals even on its own "provides good grounds" to "distinguish a cartel from oligopolistic interdependence."[102] That is not to say that Dr. Bradford's opinions are *evidence* of conspiracy, or that an explanation of oligopolistic pricing is implausible. Defendants are free to argue those points through their own experts; but their arguments go to weight and fail to justify exclusion under *Daubert*.

Defendants' case citations do not disturb this result. In *Williamson Oil*, the Eleventh Circuit held that the district court properly excluded an expert opinion that the manufacturers' conduct was "beyond mere conscious parallelism," as the expert did not "differentiate between lawful, conscious parallelism and collusive price fixing."[103] However, the expert in *Williamson Oil* literally "defined 'collusion' to include conscious parallelism," preventing the trier of fact from understanding what behavior was legal and what was not.[104] Conversely, Dr. Bradford

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[99] *Bradford* 1 ¶ 13.

[100] *Cf. In re TMI Litig.*, 193 F.3d 613, 682 (3d Cir. 1999) (quoting *Joiner*, 522 U.S. at 519).

[101] *Bradford* 2 ¶¶ 15–21.

[102] *See In re Generic Pharms. Pricing Antitrust Litig.*, 2024 WL 4980784, at *21–22 (E.D. Pa. Dec. 3, 2024); *see also In re Generic Pharms. Pricing Antitrust Litig.*, 2024 WL 4989070, at *10–11 (E.D. Pa. Dec. 5, 2024).

[103] 346 F.3d at 1321–1322.

[104] *Id.* at 1323.

illuminated that distinction in his study of the record at Step 4. Accordingly, *Williamson Oil* is inapposite. *Valspar and Chocolate* are even further afield for purposes of *Daubert*. In those cases, the Third Circuit did not venture into an analysis of the district court's *Daubert* rulings as part of its appellate review at summary judgment. The Court reads *Valspar* and *Chocolate* as going to the merits of Humana's claims.[105]

Defendants' final point that Dr. Bradford did not discuss causation also raises a merits issue and is not a reason for exclusion. Provided the expert's methodology is reliable, courts in antitrust cases regularly admit expert economic testimony that conduct is consistent with overt collusion and inconsistent with the firm's rational self-interest.[106] No cases cited by Defendants rebut that fact. *Matsushita*[107] and *State Farm*[108] specify what must be shown at summary judgment, but neither touch on expert admissibility. And although *PBM Antitrust*[109] is on point procedurally, it is distinguishable factually. In that case, the court excluded a damages expert because he did not connect declining reimbursements to price-fixing in multiple respects. The expert "offered no antitrust explanation" for the reimbursement differential, "did not consider any other factors" as being responsible for the differential, and did "not distinguish between unlawful and lawful explanations."[110] However, Dr. Bradford did all three: he "provided an antitrust explanation" by discussing market power and the market's susceptibility to unlawful

[105] *See In re Generic Pharms. Pricing Antitrust Litig.*, 2024 WL 4989070, at *10–11 (E.D. Pa. Dec. 5, 2024); *In re Generic Pharms. Pricing Antitrust Litig.*, 2024 WL 4980784, at *21–22 (E.D. Pa. Dec. 3, 2024).

[106] *See Processed Egg Prods.*, 81 F. Supp. 3d at 425; *Rail Freight*, 292 F. Supp. 3d at 52.

[107] *Matsushita Elec. Indus. Co., Ltd., v. Zenith Radio Corp.*, 475 U.S. 574, 585–86 (1986).

[108] *State Farm Fire & Cas. Co. v. Gopher Baroque Enters., Ltd.*, No. 09-322, 2010 WL 5464767, at *6 (E.D. Pa. Dec. 29, 2010).

[109] *In re Pharmacy Ben. Managers Antitrust Litig. (PBM Antitrust)*, No. 06-1782, 2017 WL 275398, at *18 (E.D. Pa. Jan. 18, 2017).

[110] *Id.*

collusion, considered other factors such as supply and demand shocks, and distinguished unlawful and lawful explanations based on his documentary review. Although he stopped short of drawing a causal inference, *Egg Products* and *Rail Freight* did not require that extra step. In sum, Dr. Bradford's comparative conclusion is not a reason to exclude his opinion.

C. Defendants' Other Arguments

Defendants note two final points of contention which the Court takes together. First, they assert that Dr. Bradford's start and end dates for the alleged collusion period are based on an unreliable methodology and do not fit the facts of the case.[111] This criticism seems to repeat their complaint that, at Step 4, Dr. Bradford improperly used record evidence to inform his opinion. As noted, though, his study of Defendants' interactions was appropriate to confirm the assumptions of his models, address "whether certain conduct is consistent with collusion or an [entity's] self-interest,"[112] and "put events into an economic context."[113] He did not use "conclusion to set his hypothesis."[114] Rather, he had "good grounds" to infer that collusion was afoot from the timing of price spikes relative to communications, and the selected start dates are a byproduct of that. If there are legitimate reasons why Defendants communicated, that goes to weight, not admissibility.[115] Similarly, the Court does not see how Dr. Bradford's use of an end date that Defendants first requested makes his analysis unreliable.[116]

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[111] Doc. No. 471 at 19–20.

[112] *Processed Egg Prods.*, 81 F. Supp. 3d at 424; *Urethane*, 2012 WL 6681783, at *3.

[113] *Rail Freight*, 292 F. Supp. 3d at 52 (internal quotations omitted).

[114] Doc. No. 471 at 19.

[115] *See i4i Ltd. P'ship v. Microsoft Corp.*, 598 F.3d 831, 852 (Fed. Cir. 2010), *aff'd*, 564 U.S. 91 (2011).

[116] *See* Doc. No. 738-22 at 15288 ("Defendants requested that Humana consider agreeing to an end date of December 31, 2018 for its alleged damages.").

Second, Defendants submit that Dr. Bradford's opinion was devoid of economic analysis.[117] The Court disagrees. At the outset, he adhered to economic principles in analyzing market power, price trends, and supply and demand. Later, he found the generic drug market susceptible to collusion due to its (1) "high concentration" of supply; (2) "multimarket contacts"; (3) "high barriers to entry"; (4) "product homogeneity"; (5) "inelastic and stable demand"; and (6) "price transparency."[118] These are clearly economic inquiries, and Defendants' qualms about the accuracy of the conclusions drawn from them, as alluded to above, are appropriately saved for cross-examination. Furthermore, while Defendants are right that Dr. Bradford's inability to distinguish between Defendants in Steps 1 through 3 weakens his testimony to a degree, his market-wide analyses can nonetheless assist the trier of fact in comprehending important economic context bearing upon Humana's overarching conspiracy allegations. Thus, even without disaggregation at a defendant-by-defendant level, Dr. Bradford's economic analyses withstand *Daubert* scrutiny.

IV. CONCLUSION

For the reasons outlined in this Opinion, Defendants' joint motion to exclude the opinions and testimony of Dr. W. David Bradford will be denied. An Order will follow.

[117] Doc. No. 471 at 24–25.

[118] *Bradford* 1 ¶ 75; *see also Rail Freight*, 292 F. Supp. 3d at 51–52 (allowing expert to opine on a similar list of economic factors, including market power, barriers to entry, homogeneity, and others).