UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF OHIO
EASTERN DIVISION

IN RE: E. I. DU PONT DE NEMOURS AND COMPANY C-8 PERSONAL INJURY LITIGATION,

Civil Action 2:13-md-2433
CHIEF JUDGE EDMUND A. SARGUS, JR.
Magistrate Judge Elizabeth P. Deavers

This document relates to: ALL CASES.

EVIDENTIARY MOTIONS ORDER NO. 1

Plaintiffs' and Defendant's Motions for Expert Opinions Related to Causation

This matter is before the Court on the Trial Plaintiffs' Motion to Partially Exclude General Causation Opinions (ECF No. 2822), the Trial Plaintiffs' Motion to Partially Exclude Specific Causation Opinions (ECF No. 2824), and Defendant's Motion to Exclude Specific Causation Opinions (ECF No. 2823). For the reasons that follow, the Court **GRANTS IN PART AND DENIES IN PART** all three of these Motion in accordance with this Opinion and Order.

I.

A. Relevant Background

The litigation between the parties in this multidistrict litigation ("MDL") began in 2001 in a class action in West Virginia state court captioned *Leach v. E. I. du Pont de Nemours & Co.*, No. 01-C-698 (Wood County W. Va. Cir. Ct.) ("*Leach* Case"). The *Leach* Case ended in November 2004 when the parties entered into a class-wide settlement ("*Leach* Settlement Agreement"). ("S.A."; ECF No. 820-8.) In the *Leach* Settlement Agreement, the parties

fashioned a unique procedure to determine whether the approximately 80,000 members of the class ("*Leach* Class") would be permitted to file actions against Defendant E. I. du Pont de Nemours and Company's ("DuPont") based on any of the human diseases they believed had been caused by their exposure to ammonium perfluorooctanoate ("C-8" or "PFOA") discharged from DuPont's Washington Works plant.

The procedure required DuPont and the plaintiffs to jointly select three completely independent, mutually-agreeable, appropriately credentialed epidemiologists ("Science Panel") to study whether there is a connection between C-8 and human disease among the *Leach* Class. (S.A. at §§ 12.2.1, 12.2.2.) If the Science Panel found that it was "more likely than not that there is a link between exposure to C-8 and a particular Human Disease among Class Members," the Panel issued a Probable Link Finding for that specific disease and DuPont waived its right to challenge whether "it is probable that exposure to C-8 is capable of causing" the Linked Disease, *i.e.*, general causation. (S.A. § 3.3.) Alternatively, the *Leach* Settlement Agreement provides that if the Science Panel delivered a No Probable Link Finding, the individual members of the *Leach* Class are forever barred from bringing personal injury or wrongful death claims against DuPont based upon their allegations that C-8 caused their disease. (S.A. § 12.2.3.)

The Science Panel engaged in its work for seven years and in 2011 and 2012 it issued Probable Link Findings for six human diseases ("Linked Diseases") and No Probable Link Findings for over forty human diseases. The members of the *Leach* Class whose claims are based on one or more of the Linked Diseases began to file cases in West Virginia and Ohio. Of the over 80,000 members of the *Leach* Class, approximately 3,500 filed cases in accordance with the *Leach* Settlement Agreement. Those actions are centralized in this MDL.

The parties selected certain members of the *Leach* Class on whose cases they would conduct more extensive discovery ("Discovery Pool Plaintiffs"). The bellwether trials are selected from the Discovery Pool Plaintiffs. Carla Marie Bartlett's case has been chosen as the first bellwether trial and John Wolf's case will be tried second ("Trial Plaintiffs"). Mrs. Bartlett alleges that she suffered from the Linked Disease kidney cancer and Mr. Wolf claims that he suffers from the Linked Disease ulcerative colitis.

B. Procedural Posture

The issues currently before the Court are directly tied to the *Leach* Settlement Agreement and this Court's discussion of that Agreement in certain Dispositive Motion Orders ("DMO(s)"). On December 17, 2014, this Court issued DMO 1 (ECF No. 1679), in which it denied DuPont's Counter-Motion for Partial Summary Judgment Regarding Application of the *Leach* Settlement Agreement ("DuPont's First Motion Regarding Causation") (ECF No. 1032), and granted in part Plaintiffs' Motion for Partial Summary Judgment related to the same issue (ECF No. 820). In DMO 1, the Court considered *Leach* Class members' burden in proving their cases-in-chief related to class membership and certain aspects of causation.

In January 2015, after DMO 1 issued, the parties filed their expert reports. (ECF Nos. 2807, 2811, 3441.)

On April 6, 2015, DuPont filed a Motion for Clarification Regarding DMO 1 ("Motion for Clarification") (ECF No. 2814), in which it incorporated its Overview Brief on Causation Issues ("Overview on Causation") (ECF No. 2813). After DuPont's Motion for Clarification was fully briefed (ECF Nos. 3201, 3563), this Court issued DMO 1-A, in which it granted DuPont's request to clarify DMO 1 and denied DuPont's request to adopt its version of the causation issue considered in that decision. (ECF No. 3972.)

C. The Parties' Evidentiary Motions

On April 6, 2015, the Trial Plaintiffs filed their Motion to Partially Exclude General Causation Opinions and their Motion to Partially Exclude Specific Causation Opinions. (ECF Nos. 2822, 2824.) On May 6, 2015, DuPont filed its joint Memorandum in Opposition to both of these Motions (ECF No. 3203), and on May 20, 2015, the Trial Plaintiffs filed their Reply Briefs in Support of their Motions (ECF Nos. 3554, 3555.) The Trial Plaintiffs' Motions are now ripe for review.

Also on April 6, 2015, DuPont filed its Motion to Exclude Specific Causation Opinions (ECF No. 2823), and on May 6, 2015, the Trial Plaintiffs filed their Memorandum in Opposition to this Motion (ECF No. 2199). The Trial Plaintiffs Filed their Reply in support of their Motion on May 20, 2015. (ECF No. 2823.) DuPont's Motion is also ready for decision.

In their evidentiary motions, the Trial Plaintiffs move to partially exclude the opinions and testimony of certain defense expert witnesses relating to what the Trial Plaintiffs contend is defined under the *Leach* Settlement Agreement as general causation. The Trial Plaintiffs and DuPont move to partially or fully exclude what both parties agree are opinions directed toward specific causation. The parties contend that certain portions of these experts' opinions fail to meet the requirements for admissibility under the Federal Rules of Evidence and *Daubert v. Merrell Dow Pharms.*, 509 U.S. 579 (1993).

Specifically, the Trial Plaintiffs maintain that the entire opinion of Douglas L. Weed, M.D., M.P.H., Ph.D. ("Weed Report"; ECF No. 2807, Ex. I) should be excluded and that portions of the following three experts' opinions should be excluded: Robert W. Rickard, Ph.D., D.A.B.T. ("Rickard Report"; ECF No. 2807, Ex. D), Samuel M. Cohen, M.D., Ph.D. ("Cohen Report"; ECF No. 2807, Ex. A), and, Stephen B. Hanauer, M.D., FACG, FAGA, ("Hanauer

Report"; ECF No. 2807, Ex. C). DuPont asserts that the entire opinions of the following three experts are inadmissible: Robert Bahnson, M.D. ("Bahnson Report"; ECF No. 2811, Ex. C), and Vitaly Margulis, M.D.,F.A.C.S. ("Margulis Report"; ECF No. 2811, Ex. D), and Robert Gross, M.D. ("Gross Report"; ECF No. 2811, Ex. A).

II.

In their Motion to Exclude General Causation Opinions, the Trial Plaintiffs contend that DuPont's experts' opinions are not relevant to the facts in issue in their cases.

A. Applicable Standard

Under Rule 702 of the Federal Rules of Evidence and *Daubert*, an expert opinion is not admissible unless it is relevant to the facts at issue in the case. In *Daubert,* the United States Supreme Court held that the Federal Rules of Evidence, in particular Rule 702 and 104(a), govern the admission of expert witness testimony and require that the trial judge "ensure that any and all scientific testimony or evidence admitted is not only relevant, but reliable." *Daubert,* 509 U.S. at 589. Because Rule 702 "requires that the evidence or testimony 'assist the trier of fact to understand the evidence,'" expert testimony "which does not relate to any issue in the case is not relevant and ergo, nonhelpful." *Daubert*, 509 U.S. at 590–90. "In other words, there must be a 'fit' between the proposed testimony and the question(s) presented by the case at bar." *Daubert*, 509 U.S. at 591.

The burden is on party proffering the expert report to demonstrate by a preponderance of proof that the opinions of their experts are admissible. *Nelson v. Tenn. Gas Pipeline Co.*, 243 F.3d 244, 251 (6th Cir. 2001).

B. The Trial Plaintiffs' Motion to Partially Exclude General Causation Opinions

The parties' briefing on the Trial Plaintiffs' Motion to Partially Exclude General Causation Opinions is directed at DuPont's experts' opinions on (1) C-8's capability of causing their Linked Diseases, and (2) what studies were available to DuPont's when it made decisions to release C-8 into the *Leach* Class' drinking water.

1. C-8's Capability of Causing Mrs. Bartlett's and Mr. Wolf's Linked Diseases

The Trial Plaintiffs direct their Motion to Exclude General Causation Opinions at DuPont's experts' opinions that Mrs. Bartlett's and Mr. Wolf's dose of and/or exposure to C-8 is *incapable* of causing their Linked Diseases. The Trial Plaintiffs contend that these opinions are not relevant because they are directed at what the parties defined as general causation in the *Leach* Settlement Agreement and it is undisputed that DuPont agreed not to contest general causation. Therefore, the Trial Plaintiffs conclude, any opinions related to general causation are excludable under *Daubert* and the Federal Rules of Evidence because they cannot assist the trier of fact to understand the evidence or to determine *any fact in issue*.

DuPont responds that its experts are not opining on general causation, but rather the opinions are directed at specific causation. In the specific causation inquiry, DuPont continues, it is necessary for the experts to scrutinize the Probable Link reports to determine whether the Trial Plaintiffs' dose of and/or exposure to C-8 is *capable* of causing their Linked Disease. DuPont argues that the Trial Plaintiffs "are mischaracterizing the Science Panel's findings" because the "Science Panel *did not find* that all *Leach* Class members had an equal, materially increased risk of developing a Probable Link Disease." (DuPont's Mem. in Opp. at 6) (emphasis added). After all, DuPont maintains, the "Science Panel never made a scientific determination of

causation." *Id.* at 24. Consequently, DuPont concludes, in spite of the issuance of a Probable Link Finding, there are certain members of the *Leach* Class, including Mrs. Bartlett and Mr. Wolf, for whom the Science Panel did not find that it was more likely than not that there is a link between their exposure to C-8 and their Linked Disease.

By way of example, DuPont's experts' opine that the Trial Plaintiffs fit into a low dose quartile of some of the objective criteria and/or protocols the Science Panel utilized in its work, and in those groups there was no statistically significant evidence of a link between exposure to C-8 and kidney cancer or ulcerative colitis. In other words, as this Court recognized in DMO 1, DuPont's position is that the Probable Link Findings may not apply to a particular member of the *Leach* Class, such as Mrs. Bartlett and Mr. Wolf, who were in the lowest exposure groups. (DMO 1 at 8.) DuPont's arguments are not well taken.

DuPont continues to rely upon its position set forth in its briefing on its First Motion Regarding Causation, Overview on Causation, and Motion for Clarification. A reiteration of DuPont's main point related to general causation is that its "*only* concession as it relates to the Bartlett and Wolf trials is that it will *not* claim that C-8 is incapable of causing either kidney cancer or ulcerative colitis," but it retains the ability to claim that Mrs. Bartlett's and Mr. Wolf's dose of and/or exposure to C-8 is incapable of causing kidney cancer or ulcerative colitis. (DuPont's Overview of Causation at 3.) In DMO 1and DMO 1-A, this Court explained in detail why DuPont's position is untenable under the *Leach* Settlement Agreement. Without restating the entirety of those decisions here, the Court reiterates a few relevant points.

The analysis of causation in the cases that make up this MDL is not the one commonly utilized in toxic tort case law. The causation inquiry is dictated by the unique procedure

established in the contractual agreement between the parties that they set forth in the *Leach* Settlement Agreement.

In the *Leach* Settlement Agreement the Science Panel is directed to determine which, if any, human diseases were linked to the actual C-8 exposure of the *Leach* Class. (S.A. §§ 12.2.1, 12.2.2.) The Science Panel engaged in its work by following specific instructions on how to choose the objective criteria and protocols it would utilize in its studies of each particular human disease. (S.A. §§ 1.49, 12.2.3(a), 12.2.3(b).) If the Science Panel's evaluations led it to conclude it is more likely than not that there is a link between the *Leach* Class' exposure to C-8 and any human disease, it issued a "Probable Link Finding" for that particular disease. (S.A. §§ 1.50, 12.2.3(b)(1).)

DuPont's framing of its experts' inquiry as one into what the Science Panel did and did not find (*i.e.*, "the Science Panel *did not find* that all *Leach* Class members had an equal, materially increased risk of developing a Probable Link Disease") is prohibited by the *Leach* Settlement Agreement. The Court addressed this topic in DMO 1, which was issued before DuPont's experts issued their reports. (DMO 1 at 9–10) (concluding that "DuPont cannot now prevent a class member from the benefit of such a finding by pointing out the 'limitations' in the objective criteria and/or protocols the Science Panel utilized to make its conclusions or by extrapolating from the Science Panel's analysis what the Panel 'did not find' in its Probable Link Finding"). As pointed out in DMO 1-A, DuPont confuses the Probable Link *reports* with the Probable Link *Findings*. (DMO 1-A) ("DuPont's mistake is focusing on the Science Panel's *reports/evaluations* instead of its *Findings*."). The *Leach* Settlement Agreement unambiguously requires application to all members of the *Leach* Class the Probable Link *Findings*, which the

parties defined as the *conclusion* reached by the Science Panel. (S.A. §§ 1.50, 12.2.3(b)(1)) (defining a Probable Link *Finding* as the Science Panel's "conclu[sion] that there is a Probable Link between C-8 exposure and Human Disease(s)").

Likewise, DuPont's attempt to frame the issue as whether or not the Science Panel made a "scientific determination" is of no consequence. In the *Leach* Settlement Agreement, the parties directed the Science Panel's work and dictated how the results would be applied to the *Leach* Class members' claims. It matters not whether, in DuPont's view, the Probable Link Findings and/or No Probable Link Findings are appropriately classified as scientific determinations. The *Leach* Settlement Agreement unambiguously dictates the effect of the Findings: If the Science Panel found that it was "more likely than not that there is a link between exposure to C-8 and a particular Human Disease among Class Members," the Panel issued a Probable Link Finding for that specific disease and DuPont waived its right to challenge whether "it is probable that exposure to C-8 is capable of causing" the Linked Disease, *i.e.*, general causation. (S.A. § 3.3) If, however, the Science Panel issued a No Probable Link Finding for a particular human disease found among members of the *Leach* Class, those members' personal injury and wrongful death claims against DuPont are forever barred. Thus, it is of no moment whether the Findings are, or are not, properly referred to as what DuPont defines as scientific determinations.

Again, as the Court explained in DMO 1 and DMO 1-A, the plaintiffs are not required to prove that their dose of and/or exposure to C-8 is *capable* of causing their Linked Diseases. If the plaintiffs prove that they are a member of the *Leach* Class and that they have or had a Linked Disease, the Probable Link Finding applies to them. Application of the Probable Link Finding

establishes that it is more likely than not that there is a link between that class member's exposure to C-8 and his or her Linked Disease, and DuPont is prohibited from challenging whether it is probable that exposure to C-8 is capable of causing that Linked Disease.

What this means in the evidentiary context is that the Probable Link Findings are valid and reliable evidence, admissible to establish that it is more likely than not that there is a link between each member of the *Leach* Class' exposure to and/or dose of C-8 and his or her Linked Disease. Indeed, DuPont confirms that it "is not contesting the 'validity and reliability' of the Science Panel's Probable Link reports." (DuPont's Mem. in Opp. at 3.) Consequently, all of DuPont's experts' opinions that support a challenge to what the parties have defined as general causation are not relevant because there is no "connection between the [opinion] being offered and [any] disputed factual issues" that are before the Court. *Price v. BIC Corp.*, 218 F.3d 566, 578 (6th Cir. 2000) (citing *Daubert*, 509 U.S. at 592). DuPont has conceded general causation as that term is defined in the *Leach* Settlement Agreement.

The Court will provide examples of statements made within the expert reports that are directed at what the parties have defined as general causation. The parties do not, and the Court will not endeavor to, go line-by-line through the reports. Instead, the Court divides the content of the expert opinions regarding general causation into two groups: (a) Opinions assessing links between C-8 and the Linked Diseases, and (b) Opinions about what the Science Panel's studies did not show. Within each group, the Court provides examples of opinions that fail to meet the requirements for admissibility under *Daubert* and the Federal Rules of Evidence.

a. Opinions Assessing Links Between C-8 and the Linked Diseases

The expert reports at issue reflect DuPont's challenge to general causation on two levels. First, some experts opine that the epidemiological data is insufficient to show that C-8 is capable

of causing either of the Trial Plaintiffs' Linked Diseases, and second, that the toxicological data is insufficient to show that C-8 is capable of causing either of the Trial Plaintiffs' Linked Diseases. The Court notes that, throughout the experts' opinions, they refer to their analysis as relating to specific causation, when in actuality the analysis is directed at what the parties defined in the *Leach* Settlement Agreement as general causation. The following opinions are excluded themselves and are examples of the types of opinions that will not be admitted.

The following opinions of Dr. Rickard:

> With respect to specific causation, there is no [toxicology] study that supports PFOA being able to cause kidney cancer at the exposure level claimed by Mrs. Bartlett. Similarly, with respect to specific causation, there is no [toxicology] study that supports PFOA being able to cause ulcerative colitis at the exposure level claimed by Mr. Wolf. There is no established mechanism of action by which PFOA could cause kidney cancer at the exposure level claimed by Mrs. Bartlett, or cause ulcerative colitis at the exposure level claimed by Mr. Wolf.

(Rickard Report at 5.)

The following opinions of Dr. Cohen:

> No [toxicology] studies support the claim that any cancer tumor could be caused at the low dose of PFOA claimed by Ms. Bartlett. Likewise, in all of the epidemiology studies, including the Science Panel studies, a possible relationship between PFOA and kidney cancer was only observed at much higher exposures than Mrs. Bartlett likely experienced. The exposure that Mrs. Bartlett claims was not associated with an increased risk of kidney cancer.

(Cohen Report at 22.)

Dr. Cohen's opinion that "[a]lthough several chemicals have been associated with the development of renal cell tumors in animal models . . ., none have been shown to be associated with an increase in renal cell carcinomas in humans." *Id.* at 8 (emphasis added).

Dr. Weed's opinion that "the risk of kidney cancer for individuals such as Ms. Bartlett, with minimal exposure to C-8, are indistinguishable from a chance finding . . . ." (Weed Report at 6.)

b. Opinions on What the Science Panels Studies Did Not Show

As addressed *supra*, and explained in detail in DMO 1 and DMO 1-A, the *Leach* Settlement Agreement prohibits scrutiny of the protocols utilized by the Science Panel to reach its Probable Link Findings for the purpose of determining what the Science Panel found and did not find or to point out the alleged limitations of the Findings. As DuPont admits, the *Leach* Settlement Agreement provides for application of the Probable Link Finding to every member of the *Leach* Class who shows that he or she has or had a Linked Disease. However, DuPont continues to confuse the Probable Link *Finding* with the Probable Link *report*.

The Court finds inadmissible DuPont's experts' analysis of the Science Panel reports in which they opine on such things as the "risk quartiles' in either the lagged or the non-lagged groups [that] contained a Confidence Interval that . . . [is] not statistically significant," an expert's "not[ing of] the fact that the Science Panel did not control for such confounders as obesity and hypertension in the cancer studies, and family history and antibiotic use in the ulcerative colitis studies," and what certain experts view as a discussion of "the limitations that the Science Panel members themselves had mentioned in their own reports." (DuPont's Mem. in Opp. at 26–27.) "DuPont's position precludes certain *Leach* Class members from receiving the benefit of the Probable Link Findings based upon an independent analysis of what the Science Panel studies allegedly found and did not find." (DMO 1-A at 9). The *Leach* Settlement Agreement prohibits this result in the same manner as it prohibits members of the *Leach* Class from challenging whether the No Probable Link Findings apply specifically to their non-linked disease.

Therefore, the following opinions fail to meet the requirements established under *Daubert* and the Federal Rules of Evidence and are also examples of the types of opinions that will not be admissible for this same reason.

The following opinion of Dr. Weed:

> In making their Probable Link determinations, the Science Panel looked at potential associations in epidemiological studies. As part of their assessments, the Science Panel looked at whether risk ratios for the study population increased with increasing estimated exposure. No threshold was established by the Science Panel of what level of exposure or dose of PFOA was required to increase the risk of any disease. There is no statement or even any suggestion in the probable link reports that there is increased risk for every class member, regardless of how low an individual's exposure or dose was.

(Weed Report at 6.)

Dr. Rickard's opinion that "[t]he Science Panel did not determine a threshold exposure or dose at which PFOA would cause kidney cancer or ulcerative colitis. The Science Panel also did not find that disease could . . . be caused at the lowest doses needed to establish class membership." (Rickard Report at 5.)

2. DuPont's Corporate Decisions Regarding the Release of C-8

DuPont argues that "totally independent" of causation issues, "exposure and dose are highly relevant to liability issues and the trier of fact's assessment of DuPont's knowledge and the reasonableness of DuPont's conduct over the relevant decades." (DuPont's Mem. in Opp. at 2.) The Trial Plaintiffs, however, "do not dispute that 'DuPont's knowledge and the reasonableness of DuPont's conduct over the relevant decades' is relevant to one or more of Plaintiffs' claims in these cases." (Trial Pls.' Reply at 8.) What the Trial Plaintiffs dispute is DuPont's ability to "open a pathway to present all of its opinions and arguments contesting general causation to the jury by arguing it is all somehow relevant to 'foreseeability' of harm

(and thus 'liability'), and therefore not barred by the" *Leach* Settlement Agreement." *Id.* at 9. This Court agrees.

Liability, unlike general causation, is a relevant area of inquiry. DuPont, however, cannot make an end-run around the *Leach* Settlement Agreement by re-labeling its (excluded) evidence that contests general causation as evidence that contests liability.

III.

The Trial Plaintiffs' Motion to Partially Exclude Specific Causation Opinions and DuPont's Motion to Exclude Specific Causation Opinions are directed at the reliability of the opinions.

A. Applicable Standard

The Supreme Court mandates that a district court exercise its responsibility in acting as the "gatekeeper" for expert testimony. *Daubert*, 509 U.S. at 588; *Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 141 (1999). This role, however, is not intended to supplant the adversary system or the role of the jury. *In re Scrap Metal Antitrust Litig.*, 527 F.3d 517, 531–32 (6th Cir. 2008). Arguments regarding the weight to be given any testimony or opinions of an expert witness are properly left to the jury. *Id.* "Vigorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof are the traditional and appropriate means of attacking shaky but admissible evidence." *Id.* (quoting *Daubert*, 509 U.S. at 596).

To determine whether expert testimony is "reliable," the court's role, and the offering party's responsibility, "is to make certain that an expert . . . employs in the courtroom the same level of intellectual rigor that characterizes the practice of an expert in the relevant field."

Kumho Tire Co. v. Carmichael, 526 U.S. 137, 152 (1999). Generally, the expert's opinions must reflect "scientific knowledge . . . derived by the scientific method," representing "good science." *Daubert*, 509 U.S. at 590, 593. The test of reliability is, however, a "flexible" one. *Kumho Tire Co.*, 526 U.S. at 140. Any doubts regarding the admissibility of an expert's testimony should be resolved in favor of admissibility. Fed. R. Evid. 702 Advisory Committee's Notes ("[A] review of the case law. . . shows that rejection of the expert testimony is the exception rather than the rule."); *Jahn v. Equine Services, PSC,* 233 F.3d 382, 388 (6th Cir. 2000) (stating that in *Daubert* "[t]he Court explained that Rule 702 displays a liberal thrust with the general approach of relaxing the traditional barriers to opinion testimony") (internal quotations omitted).

The parties' experts address specific causation through the use of differential diagnoses. The Sixth Circuit explains:

> This circuit has recognized differential diagnosis as an "appropriate method for making a determination of causation for an individual instance of disease." *Hardyman v. Norfolk & W. Ry. Co.,* 243 F.3d 255, 260 (6th Cir. 2001); *see also Best,* 563 F.3d at 178 (stating that a causation opinion based upon a reliable differential diagnosis may satisfy the requirements of Rule 702). Differential diagnosis is "a standard scientific technique of identifying the cause of a medical problem by eliminating the likely causes until the most probable one is isolated." *Hardyman,* 243 F.3d at 260 (internal quotation marks omitted). As we explained in *Best,* a physician who applies differential diagnosis to determine causation "considers all relevant potential causes of the symptoms and then eliminates alternative causes based on a physical examination, clinical tests, and a thorough case history." 563 F.3d at 178 (internal quotation marks omitted).

Pluck v. BP Oil Pipeline Co., 640 F.3d 671, 678 (6th Cir. 2011).

> Calling something a 'differential diagnosis' or 'differential etiology' does not by itself answer the reliability question but prompts three more:
>
> > (1) Did the expert make an accurate diagnosis of the nature of the disease? (2) Did the expert reliably rule in the possible causes of it? (3) Did the expert reliably rule out the rejected causes? If the court answers "no" to any of these questions, the court must exclude the ultimate conclusion reached.

Id. (quoting *Tamraz v. Lincoln Elec. Co.*, 620 F.3d 665, 674 (6th Cir. 2010)).

"'The core of differential diagnosis is a requirement that experts at least consider alternative causes.'" *Best v. Lowe's Home Centers, Inc.*, 563 F.3d 171, 179 (6th Cir. 2009) (quoting *In re Paoli Railroad Yard PCB Lit.*, 35 F.3d 717, 759 (3d Cir. 1994)). Yet, "doctors need not rule out every conceivable cause in order for their differential-diagnosis-based opinions to be admissible." *Id.* at 181. "'The fact that several possible causes might remain uneliminated . . . only goes to the accuracy of the conclusion, not to the soundness of the methodology.'" *Jahn,* 233 F.3d at 390 (quoting *Ambrosini v. Labarraque*, 101 F.3d 129, 140 (D.C. Cir. 1996)).

B. The Trial Plaintiffs' Motion to Exclude Specific Causation Opinions

The Trial Plaintiffs contend that the specific causation analyses of Dr. Hanauer and Dr. Cohen are unreliable because they fail to meet the second prong of *Tamraz*. That is, these two experts did not reliably *rule in* the Trial Plaintiffs' exposure to C-8 as a possible cause of their Linked Disease. DuPont disagrees, arguing:

> Review of their expert reports and depositions shows that both ***Dr. Cohen and Dr. Hanauer properly considered and evaluated PFOA, but determined that Bartlett's and Wolf's individualized risk of developing their respective disease was not materially increased by their relatively low personal levels of PFOA exposure***. *See e.g.*, Cohen Report at 22 ("Likewise, in all of the epidemiology studies, including the Science Panel studies, a possible relationship between PFOA and kidney cancer was only observed at much higher exposures than Mrs. Bartlett likely experienced. The exposure that Mrs. Bartlett claims was not associated with an increased risk of kidney cancer. In sum, it is my opinion . . . that the renal cell carcinoma of Mrs. Bartlett . . . was not caused by or related to her low exposure to PFOA."); Hanauer Report at 6-7 ("I have considered Mr. Wolf's claim that PFOA caused his ulcerative colitis . . . The 'Probable Link Evaluation' referenced by Dr. Gross showed only a small increased risk of developing ulcerative colitis with increasing levels of estimated cumulative exposure to PFOA . . . The Science Panel found no statistically significant results and no positive trend with increasing estimated cumulative dose in its prospective analysis, which appears to be the analysis that Mr. Wolf would fall into, since he was diagnosed after the C8 Health Project collected its data.")

(DuPont's Mem. in Opp. at 38–39.)

DuPont's arguments are not well taken. DuPont's position would prevent the Probable Link Findings from applying to the Trial Plaintiffs. DuPont relies upon its experts' ability to dissect the Science Panel's Probable Link reports to show what the Panel did not find. The Court has explained in detail *supra*, and in DMO 1 and DMO 1-A, why this analysis is prohibited by the *Leach* Settlement Agreement. In short, the parties contractually agreed to application of the Probable Link Findings and the No Probable Link Findings to every member of the *Leach* Class. Thus, each plaintiff in this MDL who can prove that he or she is a member of the *Leach* Class and has or had one of the six Linked Diseases receives the benefit of the Probable Link Finding in the same way that DuPont received the benefit of the No Probable Link Findings related to over forty human diseases.

This means, as stated above, that the Probable Link Findings are valid and reliable evidence admissible to establish that it is more likely than not that there is a link between the Trial Plaintiffs' exposure to and/or dose of C-8 and their Linked Diseases. Therefore, DuPont has contractually agreed that its experts must rule in C-8 as a possible cause of Mrs. Bartlett's kidney disease and Mr. Wolf's ulcerative colitis. Accordingly, the portions of Dr. Hanauer's and Dr. Cohen's opinions that fail to rule in C-8 as a possible cause of the Trial Plaintiffs' Linked Diseases are unreliable and excluded under *Daubert* and the Federal Rules of Evidence.

C. DuPont's Motion to Exclude Specific Causation Experts

DuPont moves to exclude all three of the Trial Plaintiffs' specific causation experts' opinions in their entirety as "methodologically-unsound and unreliable," arguing that the opinions fall short of satisfying *Daubert* and the Federal Rules of Evidence. (DuPont's Mot. at 1.) The Court will address each of the experts at issue *seriatim*.

1. Dr. Bahnson

Dr. Bahnson was deposed twice in Mrs. Bartlett's case. Initially, he was deposed as a fact witness and treating physician for Mrs. Bartlett, and subsequently he was deposed after being retained by Mrs. Bartlett as a case-specific expert witness. Dr. Bahnson is a licensed medical doctor, a surgeon, and a Board Certified Urologist, who has been practicing medicine for over thirty years. He is a Professor in the Department of Urology at The Ohio State University. Dr. Bahnson is a member of numerous medical and surgical associations and committees and also serves on the Editorial Boards for several medical journals. Dr. Bahnson is the surgeon who, in 1997, performed Mrs. Bartlett's partial nephrectomy after she was diagnosed with kidney cancer. He then treated Mrs. Bartlett in follow-up care for approximately eight years before releasing her from his care.

DuPont asserts that Dr. Bahnson (a) "failed to conduct a reliable differential" diagnosis[1] because he "unreliably ruled obesity out," "ruled in' PFOA to his differential with no consideration of Mrs. Bartlett's actual PFOA exposure or how much it increased her risk"; (b)

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[1] In a footnote, DuPont posits that [i]t is important to emphasize that the term 'differential *diagnosis'* in a clinical context refers to identifying a set of diseases or *illnesses responsible for the patient's symptoms*, while 'differential *etiology'* refers to *identifying the causal factors* involved in an individual's disease or illness." (DuPont's Mot. at 12, fn. 9) (citing Reference Manual at 617, n. 211 (emphasis supplied)). DuPont suggests that the Trial Plaintiffs' "experts' differential diagnosis might be more reliable than the same physician's opinion about causation, arrived at by a differential etiology." *Id.* (citing Edward J. Imwinkelried, The Admissibility and Legal Sufficiency of Testimony About Differential Diagnosis (Etiology): Of Under – and Over – Estimations, 56 Baylor L. Rev. 391, 405 (Spring 2004)).

Courts, however, have adopted the term "differential diagnosis" to describe the methodological process whereby case specific experts arrive at case-specific causation opinions. *See Best*, 563 F.3d at 178-80; *Hardyman*, 243 F.3d at 260; *Baker v. Chevron U.S.A., Inc.*, 533 Fed. Appx. 509, 521 (6th Cir. 2013) ("[A]bsence of a differential diagnosis is fatal to the admissibility of an expert's opinion regarding disease causation in cases involving hazardous substances.").

As the Trial Plaintiffs correctly argue, that the terms "used by the experts may differ within the legal and clinical contexts as a practicality . . . it is clear that Plaintiffs' experts conducted a proper differential diagnosis, as defined within the relevant legal context at issue, by reviewing sufficient evidence and systematically 'ruling in' and 'ruling out' potential causes to make a determination of causation for Plaintiffs' injuries, thereby rendering their specific-causation opinions sufficiently reliable to satisfy the requirements of *Daubert* and Rule 702." (Pls.' Mem. in Opp. at 7, fn. 2.) Thus, any distinction between the terms is a one without a difference within the relevant legal context.

made no independent scientific judgment, failed to support his opinion with appropriate validation, or to base it on "good science"; and, (c) prepared his report solely for purposes of this litigation. (DuPont's Mot. at 21; Reply at 17 – 19.) DuPont's arguments are not well taken.

a. Differential Diagnosis

Dr. Bahnson appropriately "ruled in" C-8 as a potential cause of Mrs. Bartlett's kidney cancer for the reasons explained *supra*. Dr. Bahnson testified that he also ruled in a number of other potential risk factors for kidney cancer, including strong family history of kidney cancer, genetic and hereditary risk factors, hypertension, smoking, workplace chemical exposure, advanced kidney disease, race, gender, advanced age, ingestion of phenacetin and/or diuretics, and obesity. (Bahnson Report at 2.) Dr. Bahnson testified that he compiled the list of risk factors from a review of the Campbell and Walsh Urology textbook, the textbook Adult and Pediatric Urology, and the American Cancer Society. (Dep. Tr. of Dr. Robert Bahnson, March 16, 2015 ("Bahnson Expert Dep.") at 26–27; ECF No. 2809-2.)

After ruling in each of these potential risk factors as the cause of Ms. Bartlett's kidney cancer, Dr. Bahnson then systematically ruled out each one out as the substantial contributing factor to Mrs. Bartlett's development of kidney cancer, and provided an explanation for his exclusions. With respect to each risk factor, with the exception of obesity, Dr. Bahnson was able to rule it out on the basis of his review of his personal medical records of Mrs. Bartlett, a review of her father's death certificate, and his training and over thirty years of experience as a urologic surgeon.

With respect to obesity, Dr. Bahnson opined that, throughout his career, he has reviewed studies examining the purported relationship between obesity and cancer, and it is his professional opinion that these studies do not establish a causal relationship. (Bahnson Expert

Dep. at 29.) Dr. Bahnson further explained, based on his professional opinion, why the studies relating to obesity and kidney cancer lack credibility, which include but are not limited to the following limitations of the studies: (1) contamination from registries for people who are entered as kidney cancer and do not have renal cell cancer, which renders conclusions about renal cell cancer in these studies suspect, if not entirely invalid; (2) detection bias relating to the advent of cross sectional imaging, which allows kidney tumors to be discovered more often than there were in the past; (3) publication bias wherein positive associations, *i.e.*, conclusions identifying a positive relationship, are more often published than those that do not identify a positive relationship; and (4) sample size. (Bahnson Expert Dep. at 47.) Dr. Bahnson clarified that these issues help to explain why the literature demonstrates an association between obesity and kidney cancer, but not a causal connection. On the other hand, Dr. Bahnson testified that it is his opinion that the epidemiological literature concerning the relationship between C-8 and kidney cancer, including the Probable Link Report, supports the conclusion that C-8 causes kidney cancer. (*Id.* at 51, 53, 54.)

DuPont takes issue with Dr. Bahnson's conclusion that the epidemiological literature concerning the relationship between C-8 and kidney cancer supports the conclusion that C-8 causes kidney cancer. DuPont contends that he subjectively and unreliably employed two different methodologies in analyzing scientific studies: one for studies related to C-8, and a different one for studies related to alternative explanations.[2] (DuPont's Reply at 6.) As an example, DuPont provides:

> Mrs. Bartlett's experts deny that that there is a well established causation relationship between obesity and kidney cancer because they have not seen the word "causation" in any of the published studies they have reviewed on obesity, and have not seen a publication stating that the Bradford Hill criteria are satisfied.

[2] DuPont makes this same argument regarding the opinions of Dr. Margulis and Dr. Gross. The same analysis the Court employs here applies equally to the opinions of Dr. Margulis and Dr. Gross.

> They believe this methodology allows them to summarily disregard the multiple, repeated studies demonstrating a strong and statistically significant association between obesity and kidney cancer, without any analysis of the extent to which Mrs. Bartlett's risk of kidney cancer was increased due to her morbid obesity. But they **fail to apply this same methodology to the studies conducted by the Science Panel**, ...

Id. at 7.

Although DuPont directs this argument toward "methodologies," it is actually assessing the validity of the experts' conclusion that the scientific data shows a stronger relationship between C-8 and kidney cancer than between obesity and kidney cancer. "The question of whether [the expert's] opinion is accurate in light of his use of [certain] data goes to the weight of the evidence, not to its admissibility[.]" *In re Scrap Metal Antitrust Litig.*, 527 F.3d at 531–32 (finding that "the district court appropriately passed the torch to the jury to make this determination"). DuPont's arguments about the accuracy of Dr. Bahnson's conclusion is appropriately left to "[v]igorous cross-examination, presentation of contrary evidence, and careful instruction of the burden of proof," rather than exclusion. *Daubert*, 509 U.S. at 596; *United States v. Davis*, 103 F.3d 660, 674 (8th Cir. 1996) (noting that the defendant was "free to challenge the expert's conclusions and point out the weaknesses of the [expert's] analysis to the jury during cross-examination" but "[w]eight and credibility are the province of the jury.").

b. Independent Analysis, Appropriate Validation and Good Science

DuPont contends that Dr. Bahnson's differential diagnosis is flawed because he allegedly did not undertake an independent analysis of Mrs. Bartlett's actual level of PFOA exposure and his testimony is not supported by appropriate validation. (DuPont's Mot. at 23) ("Rather than science, he relies on *ipse dixit*."). Dr. Bahnson did not, DuPont contends, identify any specific literature to support his conclusion, referring only to the "thousands of articles" he has reviewed as part of his career as a urologic surgeon. (DuPont's Mot. at 16; Reply at 20) (citing *Nelson v.*

Tenn. Gas Pipeline Co., 243 F.3d 244, 254 (6th Cir. 2001) (excluding expert who failed to identify any specific literature that supported his conclusion with respect to causation); *Sanchez v. Boston Sci. Corp.*, 2014 U.S. Dist. LEXIS 137189, at *42–45 (S.D. W. Va. Sept. 29, 2014) (excluding expert who claimed to have "considered the scientific literature" but could not provide specific references)).

Experts are permitted wide latitude in their opinions, including those opinions not based on firsthand knowledge. *Daubert*, 509 U.S. at 592; *Jahn*, 233 F.3d at 388. An expert is able to base an opinion on another expert witness for a point of expert knowledge not personally possessed. *Walker v. Soo Line R. Co.*, 208 F.3d 581, 588 (7th Cir. 2000) ("[C]ourts frequently have pointed to an expert's reliance on the reports of others as an indication that their testimony is reliable.") (gathering cases); *Buck v. Ford Motor Co.*, 810 F. Supp. 2d 815, 844 (N.D. Ohio 2011) (*citing Ohio Envt'l Dev. Ltd. P'ship v. Envirotest Sys. Corp.*, 478 F. Supp. 2d 963, 976 (N.D. Ohio 2007) ("[A]n expert's testimony may be formulated by the use of the facts, data and conclusions of other experts.")).

In addition to the thousands of articles about which Dr. Bahnson testified, he also specifically relied upon the Probable Link report regarding Mrs. Bartlett's Linked Disease and the expert opinion of David L. MacIntosh, ScD, CIH. that Mrs. Bartlett is a *Leach* Class Member.[3] (Bahnson Expert Dep. at 139–140.) Mr. MacIntosh is the Chief Science Officer and Director of Advanced Analytics at Environmental Health & Engineering, Inc. in Needham, Massachusetts and is an Adjunct Associate Professor of Environmental Health at the Harvard School of Public Health where each fall he teaches a course to graduate students entitled, Fundamentals of Human Environmental Exposure Assessment. (MacIntosh Expert Report; ECF

[3] DuPont makes this same argument regarding the opinions of Dr. Margulis and Dr. Gross. The same analysis the Court employs here applies equally to the opinions of Dr. Margulis and Dr. Gross.

No. 3441-11.) Throughout his professional career, he has assessed exposures to chemical contaminants, such as C-8, in the context of health risk analyses in community settings.

In his expert report, Mr. MacIntosh opines that Mrs. Bartlett's frequency and duration of consumption of drinking water contaminated with C-8, along with his own analyses and estimates of the known or knowable concentrations of C-8 in Mrs. Bartlett's drinking water for each year of her consumption. In forming his ultimate opinion that Mrs. Bartlett is a member of the *Leach* Class, Mr. MacIntosh conducted research into Mrs. Bartlett's residential history through the collection of residential property records, her C-8 exposure history through personal interviews with Mrs. Bartlett, and the review of her deposition testimony and Plaintiff Fact Sheets. Thus, unlike the cases upon which DuPont relies, Dr. Bahnson did not fail to identify any specific literature that support his conclusion with respect to causation.

c. Litigation Driven Opinions

DuPont maintains that Dr. Bahnson's expert testimony was prepared solely for purposes of this litigation, as opposed to being testimony that flowed naturally from his "independent line of scientific research or technical work outside the courtroom, which makes it especially susceptible to reliability issues." (DuPont's Mot. at 14) (citing *Simmons v. Novartis Pharms. Corp. (In re Aredia & Zometa Prods. Liab. Litig.)*, 483 Fed. Appx. 182, 190 (6th Cir. 2012) ("[T]his court views with special caution expert testimony prepared solely for purposes of litigation, rather than flowing from an expert's line of scientific or technical work."); *Lawrence v. Raymond Corp.*, 501 Fed. Appx. 515, 518 (6th Cir. 2012) ("A district court can also analyze more rigorously the admissibility of an expert's testimony if the expert's opinion was prepared solely for litigation.")). DuPont bases its argument on the fact that when Dr. Bahnson was deposed as a fact witness, he testified that he did not know if C-8 caused Mrs. Bartlett's kidney

cancer[4] and that after he was retained as an expert, he was given materials from counsel and changed his opinion. (DuPont's Reply at 21) (asserting that "he was retained as a paid litigation expert by Mrs. Bartlett and spoon fed materials by her counsel"). DuPont concludes that Dr. Bahnson's "changing testimony" makes clear that his expert report regarding specific causation was prepared solely for the purposes of litigation, and is therefore, subject to a presumption of unreliability that must be overcome by objective proof supporting the reliability of the expert's testimony. *Id.* at 2 (citing *Simmons*, 483 Fed. Appx. at 190.)

DuPont relies upon cases such as *Johnson v. Manitowoc Boom Trucks, Inc.*, 484 F.3d 426, 435 (6th Cir. 2007), where the court found the expert "in many ways to be the quintessential expert for hire" who has "spent the last twenty plus years of his life testifying as an expert in a wide variety of design defect cases" and has only vague "familiarity with the particular type of machine in question." DuPont also relies upon cases in which the experts' opinions were excluded because they were based solely on materials selected and provided by counsel such as in *Sanchez v. Boston Sci. Corp.*, 2014 U.S. Dist. LEXIS 137189, at *57–58 (S.D. W. Va. Sept. 29, 2014) (excluding plaintiff's expert who merely reviewed reports hand-selected by plaintiff's counsel prior to authoring his expert report because the court had "no way to ensure that the plaintiffs' counsel did not provide [the expert] with only those pathology reports that tended to strengthen, rather than refute, [the expert's] opinions") and *Simmons v. Novartis Pharms. Corp.*, 483 Fed. Appx. 182, 190 (6th Cir. 2012) (properly excluding as unreliable because it was solely based on "six articles plaintiff's counsel gave him," he had "never written or edited any articles,

[4] In response to questions related to the Probable Link reports, Dr. Bahnson testified: "I think it would be more accurate to state that there is information available that I'm unaware of and that I would reserve my right to make an opinion based upon careful study of the information." (Dep. Tr. of Robert R. Bahnson, July 14, 2014 ; ECF No. 3119-2.)

abstracts, or books" which addressed the alleged causal factor, and "he had also never conducted any kind of laboratory or clinical study" of the alleged causal agent).

The Court finds it unnecessary to determine whether Dr. Bahnson's specific causation expert opinion was prepared solely for the purposes of litigation, and subject to heightened scrutiny, because even if it were, there is more than sufficient objective proof exhibiting indicia of reliability. Unlike the experts in the cases upon which DuPont relies, Dr. Banson reviewed the Probable Link reports and Mr. MacIntosh's expert report, both valid and reliable scientific reports. He did not rely uncritically upon articles about subject matter about which he was unfamiliar, but utilized his background in reading, reviewing, and accepting for publication opinions just such as the reports of experts he relied upon for his opinions about the relationship between kidney cancer and C-8. Additionally, his credentials listed above reflect his expertise in the area of kidney cancer and his status as a very well-respected medical doctor in his the urologic surgical field.

d. Conclusion - Dr. Bahnson

Based on the foregoing, the Court concludes that the Trial Plaintiffs have met their burden of showing that Dr. Bahnson's expert report is admissible under *Daubert* and the Federal Rules of Evidence.

2. Dr. Margulis

Dr. Margulis is a board certified urologist and an Assistant Professor of Urology at the University of Texas, Southwestern Medical Center. He is the Fellowship Director of the Society of Urologic Oncology and the Chief of Urology at Parkland Memorial Hospital. Aside from the arguments the Court dealt with above, as indicated in footnotes one and two, DuPont contends that Dr. Margulis' expert opinion is unreliable because Dr. Margulis (a) failed to conduct a

reliable differential diagnosis, and he (b) offers a new theory that is untested speculation and lacks any scientific basis.

a. Differential Diagnosis

DuPont argues that, "[l]ike Dr. Bahnson, Dr. Margulis started from an *assumption* of *specific* causation, based solely on materials provided by counsel, and did not undertake any independent scientific analysis to weigh the respective risks to Mrs. Bartlett of her exposure to PFOA and the amount of her increased risk from other risk factors before 'ruling out' the other risk factors, including her morbid obesity." (DuPont's Mot. at 26.) DuPont posits:

> Contrary to Dr. Bahnson, Dr. Margulis acknowledges that obesity is a risk factor for the development of kidney cancer, along with a long list of other risk factors including but not limited to smoking, family history, genetic and hereditary risk factors, and hypertension. *See* Margulis Report at 6. Dr. Margulis even acknowledges that obesity is strongly associated with increased risk of kidney cancer, and that studies show the risk increases for people who are very overweight, like Bartlett. Margulis Depo. at 81:20–25 . . . Like Dr. Bahnson, however, Dr. Margulis summarily "rules out" each of these other risk factors from his "differential diagnosis" without reference to any peer-reviewed literature or scientific support, and without any weighing of the amount that Bartlett's risk of getting cancer was increased by exposure to PFOA against the amount that her risk of getting kidney cancer was increased by other risk factors. *Id.* at 6–7.
>
> Without any citation to or analysis of the numerous peer reviewed studies showing that the risk of kidney cancer is substantially increased by morbid obesity, and that the risk increases with higher BMI levels, Dr. Margulis summarily posits that "although obese at the time of her diagnosis, obesity is generally not considered a major risk factor for RCC [renal cell carcinoma], and thus I am able to rule it out as the predominant cause of Bartlett's RCC." *Id.* at 7. Dr. Margulis provides no reliable, scientific support for this subjective, summary conclusion. *Id.*; Margulis Depo. at 92:3–94:2.

Id. The Court finds DuPont's arguments not well taken for the same reasons it did above in the analysis of Dr. Bahnson's expert report.

Specifically, Dr. Margulis ruled in a number of epidemiologically supportable potential risk factors for kidney cancer, including smoking, workplace chemical exposure, obesity, family history, genetic and hereditary risk factors, hypertension, race, gender, certain medications and advanced kidney disease. (Margulis Report at 7.) After ruling in each of these potential risk factors as a potential cause of Mrs. Bartlett's kidney cancer, Dr. Margulis was able to rule out, and provide a reasonable basis for exclusion of, each risk factor referenced above, except obesity, on the basis of his review of Mrs. Bartlett's medical records, his own physical examination of Mrs. Bartlett, which included taking a medical and familial history from her, a review of her father's death certificate, and his training and experience as a urologic surgical oncologist.

As to obesity, Dr. Margulis stated that it "is generally not considered a major risk factor for [kidney cancer], and thus [he is] able to rule it out as the predominant cause of Ms. Bartlett's [kidney cancer]." (Margulis Report at 7.) In his report, Dr. Margulis explains that the basis of this opinion is, in part, premised on the fact that "[t]he evidence with respect to obesity [and its relationship to kidney cancer] is conflicting and merely observational at best with no evidence of a causal link." (Margulis Report at 7.) He further elaborated on this point at his deposition noting that some of the studies show an association between obesity and kidney cancer while others do not. (Dep. Tr. of Dr. Vitaly Margulis at 93; ECF No. 3066-1.)

DuPont's objection as to Dr. Margulis' interpretation of the data goes to its weight, not its admissibility. *In re Scrap Metal Antitrust Litig.*, 527 F.3d at 531–32. The appropriate avenue to explore the bases for Dr. Margulis' opinions is cross examination. *Id.*

b. Opinion Related to Synergistic Action

In his expert report, Dr. Margulis states:

> However, even assuming Ms. Bartlett's obesity did predispose her to [kidney cancer], or acted synergistically with C-8, my opinion remains unchanged; as set forth below, it is my opinion to a reasonable degree of medical certainty that C-8 was a substantial contributing factor in causing Ms. Bartlett's [kidney cancer].

(Margulis Report at 7.)

DuPont contends:

> Dr. Margulis suggests without *any* scientific citation or explanation that Bartlett's obesity may have "acted synergistically with C-8" to cause her kidney cancer. Dr. Margulis admits that this is speculation. His novel and unsupported "synergism" theory fails under the Rule 702 and *Daubert* analysis, under which the Court considers: (1) whether the theory has been tested; (2) whether the theory has been subjected to peer review; (3) whether there is a known potential rate of error; and (4) whether the theory has gained general acceptance. *Daubert*, 509 U.S. at 593–94. Dr. Margulis's theory falls far short of meeting *any* of these factors, as Dr. Margulis was forced to concede.

(DuPont's Mot. at 28.)

The Trial Plaintiffs do not dispute that the synergism as a theory is unreliable and inadmissible under *Daubert* and Rule 702. However, the Trial Plaintiffs contend that Dr. Margulis' statement regarding synergism is, in essence, a hypothetical. They continue, "[s]pecifically, he is assuming *arguendo* that DuPont's proffered expert witness, Dr. Cohen, is correct when he opines that obesity played a role in Mrs. Bartlett's development of kidney cancer." (Pls.' Mem. in Opp. at 33.) Plaintiffs' arguments are not well taken.

An expert opinion cannot be based on speculation. *Smelser v. Norfolk S. Ry.*, 105 F.3d 299, 304 (6th Cir. 1997) *abrogated on other grounds by Morales v. Am. Honda Motor Co.*, 151 F.3d 500, 515 (6th Cir. 1998). In the instant circumstance, Dr. Margulis' opinion regarding the synergistic action of C-8 and obesity is mere speculation, as he himself admits, and is therefore not admissible.

c. Conclusion – Dr. Margulis

The Court finds unreliable, and therefore inadmissible, the portion of Dr. Margulis' expert report that opines that Mrs. Bartlett's obesity may have acted synergistically with C-8 to have an effect on her kidney cancer. The Trial Plaintiffs have met their burden of showing that Dr. Margulis' expert opinion is admissible in all other regards.

3. Dr. Gross

Dr. Gross is the Director of Gastroenterology and the Gastrointestinal Laboratory at Southern California Hospital and is a member of the Medical Executive Committee. He is board-certified in gastroenterology and internal medicine and has over forty years of experience in gastroenterology. Other than the arguments the Court dealt with above, as indicated in footnotes one and two, DuPont contends that Dr. Gross' expert opinion is unreliable because he (a) utilized a differential diagnosis, which is not a reliable methodology where the majority of causes of a disease are unknown, and that he (b) wholly failed to account for the more likely possibility that Mr. Wolf's ulcerative colitis is idiopathic.

a. Differential Diagnosis

DuPont contends:

> As the Sixth Circuit recognized in *Tamraz*, where the cause of a condition is idiopathic in the *majority* of cases, it is "impossible to ignore and difficult to rule out." *See Tamraz*, 620 F.3d at 675 (concluding differential etiology opinion of bellwether plaintiff's specific causation expert was unreliable at trial because idiopathic causation accounted for "the vast majority" of cases of plaintiff's claimed disease).

(DuPont's Mot. at 32.) Thus, DuPont concludes that even if Dr. Gross' differential diagnosis was properly conducted, it cannot be reliable. This Court disagrees.

In *Tamraz*, the Sixth Circuit rejected expert's differential diagnosis because "his efforts to 'rule in' manganese exposure as a possible cause of the individual's disease, or to 'rule out'

other possible causes turned on speculation, not a valid methodology." *Tamaraz*, 620 F.3d at 674. In particular, the expert in *Tamaraz* failed to cite to any non-speculative evidence for his conclusion that manganese causes Parkinson's Disease, and the expert conceded that "he knew of no studies finding a link between manganese and Parkinson's Disease and that studies that have looked at that . . . have not found a very strong correlation." *Id.* at 670, 674-75. Unlike the expert in *Tamaraz* who could not point to any scientific study supporting his conclusion, Dr. Gross is able to point to the Probable Link Report and the report by Dr. David MacIntosh in support of his conclusion.

b. Idiopathic Origin

DuPont argues that "Dr. Gross fails to explain how he reliably 'ruled out' the more likely probability that [Mr.] Wolf's ulcerative colitis was idiopathic in origin, given the overwhelming body of scientific literature that identifies ulcerative colitis as a predominantly idiopathic disease—*i.e.*, the *majority* of cases are due to idiopathic causes." (DuPont's Mot. at 33.) DuPont continues, asserting that "the only two pieces of scientific literature that Dr. Gross cited in his report confirm that *ulcerative colitis is primarily an idiopathic disease*." *Id.* (citing Feurstein, *et al.*, Ulcerative Colitis: Epidemiology, Diagnosis, and Management, Mayo Clinic Proceedings, Volume 89, Issue 11, pp. 1553-63 (Nov. 2014) ("Ulcerative colitis is a chronic *idiopathic* inflammatory bowel disease.") (emphasis supplied); Osterman, Mark T., *et al.*, Ulcerative Colitis, Sleisinger and Fordtran's Gastrointestinal and Liver Disease, 9th ed., pp 1975-81 ("The etiology of UC is currently unknown but is likely multifactorial."))

The Trial Plaintiffs respond that Dr. Gross in no way ignored the idiopathic issue. They point out:

> Dr. Gross acknowledged the idiopathic issue within the body of his expert report, stating that "[t]he etiology of ulcerative colitis is controversial, although recent

> research is helping to unravel potential causes and associations." (Gross Report at 3.) Dr. Gross further stated in his expert report that "[t]he etiology of ulcerative colitis is frequently said to be "idiopathic . . . ." (*Id.* at 9.) As such, Dr. Gross clearly acknowledged and "ruled in" the idiopathic issue in conducting his differential diagnosis to arrive at his causation opinions.
>
> Dr. Gross also sufficiently explained how he reliably "ruled out" the possibility that Mr. Wolf's ulcerative colitis was idiopathic in origin. Within his expert report, Dr. Gross stated that, although the etiology of ulcerative colitis is frequently said to be idiopathic, "it is now recognized that environmental factors play a role in the pathogenesis of ulcerative colitis." (*Id.*at 9.) Dr. Gross further underscored that the "C8 Science Panel has determined that there is a probable link between exposure to C8 and ulcerative colitis among class members," and that Mr. Wolf is a *Leach* Class Member based on his review and reliance on the expert report of Dr. David MacIntosh. (*Id.*) In terms of the strength of the evidence, Dr. Gross testified that the Probable Link Report, which he reviewed and relied upon in conducting his differential diagnosis and forming his opinions, shows a strong causal relationship between C8 exposure and the development of ulcerative colitis among *Leach* Class Members, such as Mr. Wolf (*i.e.,* that Mr. Wolf's ulcerative colitis was not idiopathic in origin). 23 (Gross Dep. at 268:25-269:4.) In light of this empirical evidence, Dr. Gross made it abundantly clear during his deposition that he "ruled out" the idiopathic nature of Mr. Wolf's ulcerative colitis . . . .

(Pls.' Mem. in Opp. at 38–39.)

DuPont takes issue with Dr. Gross' conclusion that the Probable Link reports show that there is a causal connection between C-8 and ulcerative colitis. DuPont's contention is yet another attempt to prevent application of the Probable Link Findings to a member of the *Leach* Class and discredit the findings of the Science Panel. There is no basis for exclusion of Dr. Gross' report. DuPont will have the opportunity to cross examine Dr. Gross and to point out any perceived weaknesses of his analysis to the jury.

c. Conclusion - Dr. Gross

Based on the foregoing, the Court concludes that the Trial Plaintiffs have met their burden of showing that Dr. Gross' expert report is admissible under *Daubert* and the Federal Rules of Evidence.

IV.

Based on the foregoing, the Court, in accordance with this Opinion and Order, **GRANTS IN PART AND DENIES IN PART** the Trial Plaintiffs' Motion to Partially Exclude General Causation Opinions") (ECF No. 2822), the Trial Plaintiffs' Motion to Partially Exclude Specific Causation Opinions") (ECF No. 2824), and Defendant E. I. du Pont de Nemours and Company's ("DuPont") Motion to Exclude Specific Causation Opinions (ECF No. 2823).

IT IS SO ORDERED.

7-20-2015
DATE

EDMUND A. SARGUS, JR.
CHIEF UNITED STATES DISTRICT JUDGE