UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF LOUISIANA

CRAIG MOORE, ET AL.	CIVIL ACTION
VERSUS	NO: 11-1001
BASF CORPORATION, ET AL.	SECTION: R

ORDER AND REASONS

Before the Court is defendant's motion *in limine* to exclude the expert testimony of Dr. Bhaskar Kura.[1] Because the Court finds that Dr. Kura's calculations related to Mr. Moore's benzene exposure are unreliable, the Court GRANTS defendant's motion and excludes the testimony of Dr. Kura.

I. BACKGROUND

Plaintiffs' claims against International Paint arise from Craig Moore's alleged exposure to paint products containing benzene when he worked as a painter at the Avondale Shipyards from 1988-1990. In 2010, Mr. Moore was diagnosed with multiple myeloma. Plaintiffs claim that defendant manufactured products that it knew or should have known contained benzene and that it failed to warn Mr. Moore of the dangers of benzene-containing products. As evidence of Mr. Moore's exposure to benzene through his use of defendant's products, plaintiffs rely on an expert

[1] R. Doc. 235. International Paint and Valspar Corporation jointly filed this motion *in limine*. Because Valspar has been dismissed from the suit, the motion now concerns only Dr. Kura's opinions related to the products of International Paint.

report by Dr. Bhaskar Kura in which he estimated the likely level of benzene in defendant's products and Moore's cumulative benzene exposure while at Avondale.[2] Defendant filed a motion *in limine* to exclude Dr. Kura's testimony and report on the grounds that they are unreliable.[3]

II. LEGAL STANDARD

Federal Rule of Evidence 702, which governs the admissibility of expert witness testimony, provides:

> If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise, if (1) the testimony is based upon sufficient facts or data, (2) the testimony is the product of reliable principles and methods, and (3) the witness has applied the principles and methods reliably to the facts of the case.

Fed. R. Evid. 702. A district court has considerable discretion to admit or exclude expert testimony under the Federal Rules of Evidence. *See General Elec. Co. v. Joiner,* 522 U.S. 136, 138–39 (1997); *Seatrax, Inc. v. Sonbeck Int'l, Inc.,* 200 F.3d 358, 371 (5th Cir. 2000).

In *Daubert v. Merrell Dow Pharmaceuticals,* 509 U.S. 579 (1993), the Supreme Court held that Rule 702 requires the

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[2] R. Doc. 235-6.

[3] R. Doc. 235.

district court to act as a gatekeeper to ensure that "any and all scientific testimony or evidence admitted is not only relevant, but reliable." *Id.* at 589; *see also Kumho Tire Co. v. Carmichael,* 526 U.S. 137, 147 (1999) (clarifying that the *Daubert* gatekeeping function applies to all forms of expert testimony). The Court's gatekeeping function thus involves a two-part inquiry into reliability and relevance. First, the Court must determine whether the proffered expert testimony is reliable. The party offering the testimony bears the burden of establishing its reliability by a preponderance of the evidence. *See Moore v. Ashland Chem. Inc.,* 151 F.3d 269, 276 (5th Cir. 1998). The reliability inquiry requires the Court to assess whether the reasoning or methodology underlying the expert's testimony is valid. *See Daubert,* 509 U.S. at 593. The aim is to exclude expert testimony based merely on subjective belief or unsupported speculation. *See id.* at 590. Second, the Court must determine whether the expert's reasoning or methodology is relevant in that it "fits" the facts of the case and will thereby assist the trier of fact to understand the evidence. *See id.* at 591.

III. DISCUSSION

A. Estimates of benzene in defendant's products

Defendant contends that Dr. Kura's calculations of the benzene levels in defendant's products used by Mr. Moore at

Avondale are unreliable. According to his report and deposition testimony, Dr. Kura estimated the amount of benzene in the products in the following manner. He used defendant's material safety data sheets to identify the solvents in each paint product or paint thinner, although the sheets he relied on did not date from the years that Moore worked at Avondale.[4] Dr. Kura then drew upon publications written by Dr. Kopstein and Dr. Mehlman that examined harm caused by high benzene levels and that identified some of the solvents found in defendant's products as containing benzene, including xylene and naphtha. Dr. Kura used the figures cited by these studies to estimate the benzene levels of the solvents in defendant's products and then calculated the total benzene levels in the products by estimating the volume of the solvents in each product.

Defendant first challenges Dr. Kura's opinions as to the benzene levels in its products on the ground that his estimates of the benzene content of the products' solvents were drawn from outdated studies that Dr. Kura did not verify. An expert may rely on data collected by another expert but must conduct some independent research in order to demonstrate that the calculations are reliable. *See Lightfoot v. Hartford Fire Ins. Co.,* No. 07-4833, 2011 WL 39010, at *4 (E.D. La. Jan. 4, 2011) (citing Fed. R. Evid. 703; *Bryan v. John Bean Division FMC*

[4] R. Doc. 235-6.

Corp., 566 F.2d 541, 545 (5th Cir. 1978)); *JRL Enters. v. Procorp Assocs., Inc.,* No. 01–2893, 2003 WL 21284020, at *8 (E.D. La. June 3, 2003) (expert's testimony inadmissible because expert adopted figures calculated by another expert without any research to determine their reliability).

Dr. Kura did not conduct his own tests of benzene levels or analyze available data himself but rather relied on figures presented in the works of Dr. Kopstein and Dr. Mehlman. Although Dr. Kopstein's publication dates from 2006, Dr. Kopstein did not personally conduct tests of benzene levels. Instead, he relied on the figures cited by Dr. Mehlman,[5] who in turn relied on studies from the 1950s and 1960s for the amount of benzene in naphtha, and a source called "Dupont (Memo to John Coleman)" from 1978, for the benzene level in xylene.[6] No evidence has been put forth suggesting that Dr. Kura investigated in any way the reliability of the figures cited by the studies. In fact, during his deposition Dr. Kura testified that he had never seen the memo that was the original source of the data cited by Dr. Mehlman for the benzene content in xylene.[7] *Cf. Johnson v. Samsung Elec. America, Inc.,* 277 F.R.D. 161, 166 (E.D. La. 2011)(expert's failure to conduct independent tests did not render his testimony

[5] R. Doc. 258-12.

[6] R. Doc. 258-13.

[7] R. Doc. 235-5 at 37.

unreliable, given the investigative acts that he undertook in forming his hypothesis and his evaluations of others' findings). Dr. Kura took no steps to verify the estimates that form the basis of his analysis of Mr. Moore's exposure to benzene and instead relied entirely on the publications of others, who themselves relied on data collected by third parties. Dr. Kura's distance from the source of the figures he cites leaves the Court unable to assess the validity of the methodology that produced these critical data. *See Daubert*, 509 U.S. at 593.

Further, putting aside whether the original studies of benzene levels produced reliable data, Dr. Kura's report and deposition offer no evidentiary basis for the assumption that these calculations have any bearing on the level of exposure experienced by Mr. Moore in the late 1980s, decades after some of the studies were conducted. During his deposition, Dr. Kura was asked whether he agreed that the benzene level in xylene would likely be substantially less between 1988 and 1990 than in 1978, given that the Occupational Safety and Health Administration finalized benzene guidelines and restrictions in 1987. Dr. Kura agreed but stated that because he was not provided with information from defendant, he had "no option but to rely upon what [he had] access to."[8]

[8] R. Doc. 235-5 at 38.

Even if Dr. Kura relied upon the best data available to him, "there is simply too great an analytical gap between the data and the opinion proffered." *LeBlanc ex rel. Estate of LeBlanc v. Chevron USA, Inc.*, 396 F. App'x 94, 98 (5th Cir. 2010) (affirming district court's exclusion of expert testimony on the grounds that the studies relied on were not a sufficient basis for the expert's opinion). Plaintiffs contend that defendant has not shown that benzene levels in the solvents were lower in the late 1980s than in the years in which the data were collected. But, defendant has submitted an affidavit from its expert, attesting to the substantial reductions nationwide in benzene levels in the years before Moore worked at Avondale.[9] In any event, plaintiffs bear the burden of demonstrating that their expert's testimony is reliable. *See Moore,* 151 F.3d at 276.

In arguing that the data Dr. Kura used were applicable to Mr. Moore's benzene exposure, plaintiffs have submitted an affidavit from Dr. Kura in which he asserts that documents obtained after he completed his report support the benzene estimates that he used for xylene and naphtha.[10] John Kelly, an International Paint employee, testified that International Paint used raw xylene supplied by Shell and Hill Chemical (previously

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[9] R. Doc. 235-8 at 5.

[10] R. Doc 258-15.

called Phibro Energy), as well as several other manufacturers.[11] Plaintiffs present one xylene specification sheet from Shell and one from Phibro Energy, both of which indicate that benzene constituted a maximum of 0.1% of the xylene's volume.[12] Dr. Kura's estimate of the benzene content in xylene, drawn from Dr. Mehlman's publication, was 1000 ppm,[13] which he states in his affidavit is equal to 0.1% volume.[14] Dr. Kura concludes that the product sheets are consistent with the estimates that he used for his calculations of Mr. Moore's exposure to benzene.

Although the specification sheets originate from the period during which Mr. Moore worked at Avondale, the Court finds that they do not cure the deficiencies in Dr. Kura's estimates. Under *Daubert*, the Court must determine whether Dr. Kura's underlying methodology was valid, and evidence produced after he completed his report does not bear on the question of whether his analysis was based on reliable facts or unsupported assumptions. *See, e.g., Castellow v. Chevron USA,* 97 F. Supp. 2d 780, 794-95 (S.D. Tex. 2000)(excluding expert's testimony because his report was not based on evidence of plaintiff's benzene exposure and information that he later received could not "lend much

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[11] *Id.* at 6.

[12] R. Doc. 258-17.

[13] R. Doc. 235-6 at 10.

[14] R. Doc 258-15.

retroactive support to his original conclusion"). Further, the product sheets indicate that the xylene from the two companies contained a maximum of 0.1% benzene, which may or may not reflect the actual benzene content, as opposed to a percentage over which the benzene content will not rise.[15] In fact, the Shell sheet describes xylene as having a typical property of "L.T. 0.1" benzene, which defendant asserts stands for less than 0.1% benzene.[16] Finally, defendant's raw material data sheet that plaintiffs submitted lists five separate suppliers of xylene, and no information has been provided on the benzene content of the other suppliers or the way in which defendant used or combined solvents from different suppliers.[17]

Dr. Kura's estimate of the level of benzene in the naphtha that International Paint used is even more speculative. In his affidavit, he cites material safety data sheets from Shell that identified the benzene content of three different types of naphtha as having at least two percent benzene content.[18] Dr. Kura claims that such figures validate his conclusion that defendant's products had high benzene contents, since he estimated the benzene content in the naphtha that defendant used

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[15] R. Doc. 258-17.

[16] *Id.* at 2.

[17] R. Doc. 258-15 at 7.

[18] *Id.* at 2, 18, 23, 28.

to be 1000 ppm, or one percent of the content,[19] which would in fact suggest that his benzene estimate was lower than the actual amount. But, John Kelly testified only that International Paint received xylene from Shell; whether Shell also supplied naphtha to International Paint during the period in question was not discussed in the excerpt of the deposition provided to the Court.[20] In fact, the Shell data sheets were drawn from an unrelated lawsuit. Further, the material safety data sheets produced by International Paint for the years that Moore worked at Avondale reveal that the naphtha in its products had a different identification number than those listed on the Shell safety sheets, revealing the naphtha used by defendant to be a different type of solvent than the three products described by the Shell materials.[21] Thus, Dr. Kura's assumption that the level of benzene identified by the Shell safety sheets corresponds to the level of benzene in the naphtha used by International Paint is not supported by the record.

An expert is entitled to accept one set of facts over another if the facts in a case are disputed. *See Wagoner v. Exxon Mobil Corp.*, 813 F. Supp. 2d 771, 807 (E.D. La. 2011). But Dr. Kura's benzene estimates are not based on disputed facts but

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[19] *Id.* at 1.

[20] R. Doc. 258-15 at 6.

[21] *Compare* R. Docs. 258-15 *and* 168-6.

rather on a series of assumptions that have not been tested. Dr. Kura used data on benzene levels in solvents that originated from unverified sources and predated Moore's time at Avondale by at least a decade. His report offered no support for the hypothesis that benzene levels in solvents remained constant, despite the introduction of major regulation between the time the data were collected and Mr. Moore's employment at Avondale. Dr. Kura assumed that he had identified the specific solvents used by defendant. His report also did not include his actual calculations of the benzene levels in each product, which would allow his methodology to be tested and validated.[22] *See Watkins v. Telsmith Inc.*, 121 F.3d 984, 992 (5th Cir. 1997)(affirming district court's exclusion of expert in part because the expert did not produce calculations or sketches in support of his opinions). In fact, during his deposition, Dr. Kura testified that he deleted any calculations that do not appear in his report.[23] Thus, it appears that even Dr. Kura cannot easily verify or reproduce his estimates. For all of the foregoing reasons, the Court finds that Dr. Kura's calculations of the benzene levels in defendant's products are far too speculative to provide a reliable foundation for the level of exposure experienced by Mr. Moore at Avondale. His opinion on this issue

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[22] R. Doc. 235-5 at 112.

[23] *Id.* at 69-70.

is therefore excluded.

B. Cumulative benzene exposure

Defendant also argues that Dr. Kura's estimates of the number of hours and the conditions under which Mr. Moore worked, which Dr. Kura used to assess Moore's cumulative benzene exposure, are unreliable and inflated. Dr. Kura's exposure analysis rests upon an initial conclusion that defendant's products contained a certain level of benzene. Therefore, because the Court finds that Dr. Kura's calculations of the benzene levels in defendant's products are unreliable under the standards set forth in *Daubert*, Dr. Kura's related calculations concerning Mr. Moore's overall exposure to benzene while at Avondale are necessarily unreliable. Further, the Court finds that Dr. Kura's conclusions about the length and conditions of Mr. Moore's exposure to defendant's products are highly speculative, due to a number of assumptions he made regarding Moore's work at Avondale.

Dr. Kura estimated that Moore worked 3512 hours at Avondale but used a figure of 3000 hours in his model to account for possible error.[24] But, although Dr. Kura indicated that 3000 hours was a conservative estimate, defendant presents evidence that it substantially exceeds the number of hours that Mr. Moore worked.[25] Dr. Kura testified that his estimate was based on

[24] R. Doc. 235-5 at 74.

[25] R. Doc. 235-8 at 8.

Moore's total earnings from Avondale, as reflected on Social Security records, divided by an assumed hourly rate.[26] He acknowledged that he did not view Mr. Moore's Avondale personnel file before calculating the total number of hours that Moore worked, which would have been more accurate.[27]

Dr. Kura's methodology in calculating Moore's hours is unreliable, because his assumptions are contradicted by record evidence. An examination of the year 1988, in which Moore accrued the largest number of hours at Avondale, bears this out. Dr. Kura estimated that Moore worked a full year at Avondale in 1988, but in fact, Moore did not begin work until February 4, 1988.[28] Dr. Kura acknowledged that he may have overlooked the start date when asked about the extra month of hours.[29] Dr. Kura also assumed for the purpose of his model that Moore worked every day during the employment period at Avondale, testifying that he "ignored" the hours that Moore may not have worked due to sickness, vacation, or lack of work.[30] Further, he assumed that Moore was paid $6.00 an hour throughout 1988, when his employer's records reflect rates of pay of $6.99, $7.44, and $8.00 per hour

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[26] R. Doc. 235-5 at 77.

[27] *Id.* at 77-79.

[28] R. Doc. 235-2 at 51.

[29] R. Doc. 235-5 at 75.

[30] *Id.* at 76.

in that year.[31] The higher rates would reduce Dr. Kura's estimate of the number of hours that Moore worked in 1988. The discrepancy between Dr. Kura's estimate and Avondale's records is substantial, as Dr. Kura calculated that Moore's hours in 1988 totaled approximately 1920 hours,[32] but Moore's employment records indicate that Moore worked only 1,167 hours in 1988, or 40 percent less than Dr. Kura estimated for that year.[33] Thus, even if Dr. Kura arbitrarily reduced his 3500 estimate by 500 hours, that would not account for the 700 hour error in 1988 alone. In his deposition, Dr. Kura conceded that if Moore worked fewer hours than the 3000 that he estimated, his calculations as to Moore's benzene exposure would be affected.[34]

Also casting doubt on the reliability of Dr. Kura's exposure estimate are the figures that he used to quantify the way in which Mr. Moore spent his time at Avondale. Dr. Kura testified that because Moore indicated that he completed non-painting tasks such as sandblasting but did not state the amount of time devoted to these activities, Dr. Kura assumed that they comprised only

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[31] R. Doc. 153-4.

[32] R. Doc. 235-6 at 10.

[33] R. Docs. 153-4 at 2; 312-2 at 13 (The deposition in fact states that Moore worked 116 hours during this period, but this appears to be the result of a transcription error).

[34] R. Doc. 235-5 at 79.

ten percent of Moore's time at Avondale.[35] Dr. Kura then testified that he assumed that during the remaining 90 percent of the hours that Moore spent at Avondale, he painted or cleaned with paint thinners at all times.[36] There is no evidentiary basis for these assumptions, which appear to increase unrealistically Moore's rate of exposure. When asked whether his model accounted for time spent completing tasks required before painting, such as grinding, scraping, or using sandpaper,[37] Dr. Kura responded that he could not capture that information.[38] Dr. Kura also speculated that Moore spent 65 percent of his time using paint thinners (to which he attributes a higher benzene content) and 35 percent of his time using paint, but he admitted that there was no evidence in the record to support that assumption.[39] Further, Dr. Kura assumed that Moore used only Valspar and International Paint products, despite Moore's testimony that he used products made by other manufacturers.[40] Moreover, Dr. Kura estimated that Moore and his coworkers each used an average of five gallons of paint

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35 R. Doc. 235-5 at 73.

36 *Id.* at 79; 235-6 at 14.

37 R. Doc. 235-2 at 20.

38 R. Doc. 235-5 at 79-80.

39 *Id.* at 96.

40 R. Doc. 235-5 at 106-08.

per day and 17.5 gallons of thinner.[41] But in discussing the amount of paint used, Mr. Moore said that it depended on where "we were working",[42] indicating that he was referring to the amount of paint used by a group of painters. The potential error introduced by this estimate is magnified by Dr. Kura's unfounded assumption that when cleaning was conducted in the engine room, fifty people were present, each individually using this amount of product.[43]

Dr. Kura's assumptions about the ventilation Moore experienced, the location of Moore's work, and Moore's dermal exposure also failed to account for conflicting evidence or were based on speculation. For example, Dr. Kura assumed a complete absence of ventilation in the areas in which Moore worked.[44] Yet, Moore testified that some days there was good ventilation in the vessels and others there was not.[45] He also stated that when he worked in the tanks, hoses provided some ventilation, albeit limited.[46] Avondale employee Danny Joyce testified about Avondale's system of ventilation, which pushes air into

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[41] R. Doc. 235-6 at 14.

[42] R. Doc. 235-3 at 2-3.

[43] R. Doc. 235-5 at 100-101; 235-6 at 15.

[44] R. Doc. 235-5 at 89.

[45] R. Doc. 235-3 at 6.

[46] R. Doc. 235-2 at 11.

compartments and then exhausts air, and is complemented by the ships' ventilation systems, as well as large fans.[47] Further, Dr. Kura estimated that the respirator that Moore wore provided him with only one hour of protection per day, with a 70 percent reduction in exposure for that hour.[48] Dr. Kura could not provide a source for his estimate that benzene exposure would be reduced 70 percent,[49] and he cited Moore's testimony that his respirator *sometimes* became saturated after an hour as evidence that it always provided only one hour of protection.[50] Yet, Moore in fact testified that his respirator sometimes became saturated and that he could retrieve a new respirator at lunch.[51] Moore also testified that "most of the Avondale work was indoors"[52] but that he completed some tasks outdoors[53] and cleaned himself at the end of the day outdoors.[54] For his model, Dr. Kura assumed that other than the ten percent of the total hours that he estimated Moore spent sand-blasting, *all* of Moore's work was completed

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47 R. Doc. 312-2 at 4-5, 18-20.

48 R. Doc. 235-5 at 90.

49 *Id.*

50 *Id.* at 93. (emphasis added).

51 R. Doc. 235-2 at 10, 26-27.

52 *Id.* at 11.

53 R. Doc. 235-2 at 31, 37

54 *Id.* at 17.

indoors.[55] Finally, Dr. Kura assumed, without supporting testimony from Moore, that Moore's arms, hands, and trunk were fully saturated with solvent for over 15 percent of his time at Avondale, by Kura's calculations, over 500 hours.[56]

In her critique of Dr. Kura's methodology, defendant's expert Jennifer Sahmel, an industrial hygienist, noted that Dr. Kura did not account for the uncertainty in his exposure parameters, *e.g.*, the variables of Moore's work, and did not conduct a validation step to assess whether his results were plausible.[57] Sahmel states that she performed a validation check on Dr. Kura's estimates related to Moore's use of defendant's thinner in the engine room. Sahmel found that under the conditions assumed by Dr. Kura, the airborne concentration of xylene in the engine room would have been ten times the level deemed immediately dangerous to life or health and so high as to create an explosive atmosphere in the room.[58] In his affidavit, Dr. Kura had an opportunity to respond substantively to Sahmel's critique. But, rather than presenting his calculations or demonstrating the validity of his exposure modeling, Dr. Kura dismissively claimed that Sahmel simply does not understand

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[55] R. Doc. 235-5 at 86.

[56] *Id.* at 98.

[57] R. Doc. 235-8 at 3-4.

[58] R. Doc. 235-8 at 6.

emissions modeling and differences in the properties of benzene and xylene.[59] Thus, he provided nothing to dispute Sahmel's demonstration that under his estimate of the benzene levels present at Avondale, Mr. Moore would have immediately become ill or died.

In sum, not only do Dr. Kura's estimates lack reliable sources, but he assumed the highest possible exposure for most variables, even when those assumptions contradicted the testimony given by Mr. Moore. For all of the foregoing reasons, the Court finds that Dr. Kura's opinions as to Moore's exposure to benzene from defendant's products while at Avondale are unreliable and therefore inadmissible.

C. Opinions on construction, design, warranties, and warnings

Defendant challenges Dr. Kura's qualifications to testify about defects in construction, design, warranties, and warnings associated with defendant's products. Dr. Kura's conclusions on these subjects are predicated on his opinion that defendant's products contained unreasonably dangerous levels of benzene. Because the Court finds that Dr. Kura's testimony on the benzene content in defendant's products is too unreliable to be admitted, the Court necessarily finds to be inadmissible Dr. Kura's conclusions as to whether defendant's products were unreasonably

[59] R. Doc. 258-15 at 3.

dangerous in their design, manufacture, nonconformity to express warranties, or lack of adequate warnings.

Further, defendant submitted evidence that Dr. Kura's conclusions as to the warnings that defendant should have placed on its products were copied verbatim from the report of another expert, to the extent that Dr. Kura even referred to an article by Dr. Melvyn Kopstein as "my" article.[60] Using the opinions of another does not automatically render expert testimony inadmissible. *See e.g., Legier and Matterne v. Great Plains Software, Inc.*, 2005 WL 2037346, at *4 (E.D. La. Aug. 3, 2005)(denying motion to strike testimony based in part on allegations that paragraph in expert report was plagiarized). Yet, here, Dr. Kura's use of Dr. Kopstein's work is particularly problematic in that Dr. Kura first testified that the report he proferred was his original drafting and that he had not reviewed other expert reports.[61] When asked to explain why many of his sentences were nearly identical to Dr. Kopstein's, he later conceded that he saw Dr. Kopstein's report and at the very least took notes.[62] The likelihood that substantial portions of Dr. Kura's report do not reflect his original work is yet another reason the Court finds that Dr. Kura's opinions in general are

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[60] *Compare* R. Docs. 235-6 at 12-13 *and* 235-4 at 32-36.

[61] R. Doc. 235-5 at 51-53, 55.

[62] *Id.* at 55-66.

unreliable. The Court therefore deems Dr. Kura's report and testimony to be inadmissible at trial in their entirety.

IV. CONCLUSION

For the foregoing reasons, the Court GRANTS defendant's motion to exclude plaintiffs' expert, Dr. Bhaskar Kura.

New Orleans, Louisiana, this 30th day of November, 2012.

SARAH S. VANCE
UNITED STATES DISTRICT JUDGE