

Confronting Experts Whose Opinions Are Neither Supported nor Directly Contradicted by Scientific Literature

In complex litigation, cases are often won or lost based on who wins the “battle of the experts.” Yet, one of the main weapons that experts use for “battle” in the medical and scientific arenas — scientific and medical literature — is often notably absent in Florida courtrooms. Not only are juries deprived of citation to literature because of its status in Florida as “hearsay,” but judges have been reluctant to look to literature as a means of disallowing expert opinion testimony when that testimony is based on pure opinion.

Imagine the following scenario: A world renowned oncologist makes a presentation to a committee of oncologists that based on his years of treating cancer patients, he believes exposure to chemical *X* causes cancer. Yet, this oncologist has absolutely no scientific studies to present in support of his opinion. Rather, the oncologist has treated thousands of cancer patients who were exposed to *X*, and he believes that there must be a causal link between their exposure and their cancer. While many of us might view this opinion as a suggestion for someone to study the issue more thoroughly, few of us would likely rely on the opinion of one oncologist as proving that exposure to *X* causes cancer.

As absurd as this hypothetical may seem, this is just the type of opinion that Florida courts have held admissible based on the “pure opinion doctrine.” Thus, determining whether such an opinion supports a conclusion that *X* causes cancer — while not a question we would expect expert oncologists to evalu-

ate — is often a question that we ask lay jurors to decide. If this same oncologist were retained as an expert witness by a plaintiff who was exposed to *X* and developed cancer (or by a defendant who is claiming that *X* was the alternative cause of plaintiff’s cancer as opposed to some exposure attributable to his client), and the oncologist formed the opinion that *X* caused plaintiff’s cancer, then, under the pure opinion doctrine in Florida, this oncologist may very well be permitted to testify at trial regarding his opinions.

The lawyer confronting such an expert typically would have three angles of attack: 1) Try to get the court to exclude the expert’s testimony; 2) cross-examine the expert on the lack of a basis for the opinion; 3) utilize the attorney’s own expert to explain why this opinion is incorrect. For each of these modes of attack, the most powerful weapon is the fact that the opposing expert’s opinion has no basis in scientific or medical literature.

Yet, each of these chosen avenues of attack is littered with obstacles. First, Florida case law regarding pure opinion testimony may make the lack of literature irrelevant in an attempt to exclude the expert. Second, a question on cross-examination asking the witness about the lack of literature could very well elicit the following unhelpful answer, “I didn’t even bother to look for literature. I have been practicing medicine for over 30 years and I have seen exposure to *X* cause cancer in hundreds of my patients. I don’t know if there is any literature on this; I just know it to be true based on my own clinical

experience.” Third, recent case law interpreting the rule against “bolstering” can be read to prohibit using your own expert to testify regarding the lack of scientific literature on a given topic.

Obstacles to Confronting Pure Opinion Testimony in Florida

Florida courts have defined “pure opinion” testimony as an expert opinion that is based on the expert’s “personal experience and training.”¹ In *Holy Cross Hospital, Inc. v. Marrone*, 816 So.2d 1113 (Fla. 4th DCA 2001), the Fourth District articulated the difference between expert opinions admissible under the pure opinion doctrine and those that are subject to a *Frye* analysis: Pure opinion refers to expert opinion developed from inductive reasoning based on the experts’ own experience, observation, or research, whereas the *Frye* test applies when an expert witness reaches the conclusion by deduction, from applying new and novel scientific principle, formula, or procedure developed by others.

In some ways, the distinction between opinions that must meet the *Frye*² test and those that are based on pure opinion seems counterintuitive and potentially counterproductive. If an expert witness dares to utilize scientific literature as a tool in helping form an opinion, then the court can and will scrutinize that opinion under *Frye*. In *Holy Cross*, for example, the Fourth District held that an expert’s opinion regarding when a patient’s cancer spread to the lymph nodes was subject to a *Frye* analysis because the expert relied on cancer staging

studies in forming his opinion.³ Yet, employing the analysis articulated by the *Holy Cross* court also leads to the conclusion that if the expert had simply avoided these studies and based his opinion on his own clinical experience in diagnosing the spread of cancer cells, then this opinion very well may have been admissible as pure opinion and not subject to a *Frye* analysis.⁴ In other words, if an expert totally ignores scientific literature and bases his or her opinion solely on what he or she believes to be the case as a result of intuition, that is harder for an opposing lawyer to challenge than an opinion based on an analysis of literature.

The *Tursi* case provides an excellent example of this problem. In *Florida Power and Light v. Tursi*, 729 So. 2d 995 (Fla. 4th DCA 1999), the Fourth District held that an ophthalmologist could opine as to whether a patient's cataracts were caused by exposure to polychlorinated biphenyls (PCBs) even though there was absolutely no scientific literature that supported a link between PCBs and cataracts. The court discounted the lack of scientific support for the ophthalmologist's opinion by declaring that his testimony was pure opinion and "does not rely on a scientific principle or test which would have to comply with *Frye*."⁵ Yet, this distinction seems to provide experts with an incentive to avoid conducting any literature review or other research to evaluate their opinions. For example, if the expert in *Tursi* had reviewed literature on chemical exposures that cause cataracts and extrapolated that a dose of PCBs would cause cataracts in support of his opinion, then his opinion might have been subject to a *Frye* analysis and, thus, excluded by the same principles applied in *Holy Cross*.⁶ Yet, by completely avoiding scientific literature — and science for that matter — the expert escapes the *Frye* challenge and has his opinions admitted.⁷

Isn't Pure Opinion That Has No Basis in Scientific Literature "New or Novel"?

The Fourth District's analysis in

Tursi raises the question of what is truly meant by "new or novel" under the *Frye* test. Returning to the hypothetical discussed at the beginning of this article, if there is absolutely no scientific literature that supports the conclusion that exposure to *X* causes cancer, isn't it "new or novel" when an expert takes the stand in a court of law and offers an opinion that exposure to *X* causes cancer?

In the last two years, both the Second and Fifth districts have wrestled with this very issue in cases where experts opined that a plaintiff developed fibromyalgia⁸ as a result of an automobile accident. Although both courts recognized that the causes and disease process of fibromyalgia were unknown to medical science, they reached divergent opinions regarding whether a medical doctor could offer an expert opinion linking a plaintiff's fibromyalgia with an automobile accident.

The Second District, in *State Farm v. Johnson*, 880 So. 2d 721 (Fla. 2d DCA 2004), held that a medical expert's opinion linking fibromyalgia and an automobile accident was admissible as pure opinion if it was based on the expert's clinical experience. The party trying to exclude the expert's causation opinions in *Johnson* argued that, under a *Frye* analysis, "[T]he scientific community's failure to reach a generally accepted understanding of the physical mechanism that causes fibromyalgia requires the exclusion of expert opinion testimony that, within a reasonable degree of medical certainty, [plaintiff's] fibromyalgia resulted from the auto accident."⁹ Put another way, the party opposing the expert was arguing that, when the scientific community has not determined what causes a particular disease (e.g., fibromyalgia), an expert's opinions regarding what caused the plaintiff to develop that disease were "new or novel." Neither the trial court nor the Second District, however, was persuaded by this argument. The Second District did not even focus on the lack of scientific evidence to support the opinion but rather relied on the simple fact that the opinion was based on the expert's clinical

experience and was, thus, admissible as "pure opinion" testimony.¹⁰

The Fifth District, on the other hand, when recently confronted with a substantially similar set of facts in *Marsh v. Valyou*, 917 So. 2d 313 (Fla. 5th DCA 2005), held that an expert's opinion that an automobile accident caused a plaintiff's fibromyalgia was not admissible under a *Frye* analysis. The court squarely disagreed with the Second District's holding in *Johnson* and focused on the fact that there was no scientific support for an expert to opine on what caused a particular patient's fibromyalgia. The Fifth District's opinion contained a lengthy discussion about the fact that in all of the scientific studies and medical consensus statements on fibromyalgia, no one has reached scientific conclusions regarding the cause of fibromyalgia. Due to the wealth of scientific literature on the subject — none of which supported the expert's opinion — the court found it inappropriate to permit this opinion under the pure opinion doctrine:

To us it is counterintuitive to permit an expert to ignore scientific literature accepted by the general scientific community in favor of the expert's personal experience to reach a conclusion not generally recognized in the scientific community and then allow testimony about that conclusion on the basis that it is pure opinion.¹¹

The approach in *Marsh* provides some assistance to the lawyer confronted by an expert opinion that has no scientific literature to support it. The Fifth District certified conflict with the *Johnson* opinion, and the parties were briefing the merits in the Florida Supreme Court as this article went to press.

Of the Fifth District's analysis in *Marsh* and the Second District's analysis in *Johnson*, the *Marsh* analysis makes more sense. Moreover, it is certainly the better of the two cases for purposes of challenging an opponent's expert. Although the *Marsh* court focused on the overwhelming wealth of literature, stating that the causes of fibromyalgia were unknown, the court's analysis still provides guidance for situations when there is absolutely no

literature whatsoever addressing the salient issue. In these circumstances, and those in the hypothetical regarding whether exposure to *X* causes cancer, attorneys confronting such an expert may want to consider utilizing the Fifth District's reasoning to argue that an opinion unsupported by literature is an opinion subject to a *Frye* analysis, not a pure opinion analysis.¹²

Of course, if your efforts to exclude the expert are unsuccessful, then you are left with the two remaining options of cross-examination and utilizing your own expert. Clearly, if you have substantial literature that contradicts the expert, you will do your best to use it for impeachment purposes. But, when you are dealing with an opinion that the scientific literature neither supports nor contradicts, then you may have a problem getting that fact in front of the jury. Again, if the expert's opinion is pure opinion, he or she likely will not admit that there is no literature on the issue. Indeed, the expert will tell you that he did not even look at literature because his opinion is based on his clinical experience, not literature. It's one thing to cross-examine an expert with tangible literature that contradicts the expert's opinion: You can hold it in your hand, have the expert read it, and let the jury hear about it. But, how do you cross-examine an opposing expert about the complete absence of literature on a topic if the expert has not conducted a literature review; does not believe one would be necessary; and can neither admit nor deny whether there is literature on the topic?

If you want to get the absence of literature in front of the jury, you may very well be left trying to get it in through your own expert. But, this avenue is fettered with obstacles, as well.

Can You Bolster Your Own Expert with No Literature?

In articles in *The Florida Bar Journal* by Jeffery S. Badgley¹³ and Mike Trentalange,¹⁴ the authors addressed the limitations imposed upon lawyers by the Florida evidence code's rejection of the federal

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“learned treatise” exception to the hearsay rule and the antibolstering provisions set forth in F.S. §90.706 and the Florida cases interpreting this rule. Florida courts have consistently applied §90.706 as a tool for prohibiting reference to literature on direct examination¹⁵ as well as re-direct examination.¹⁶

However, only one Florida court appears to have addressed the issue of whether the prohibition against bolstering applies to testimony regarding the absence of literature on a particular matter. In what appears to be the first Florida case addressing both bolstering on re-direct examination and bolstering by discussing the absence of literature, the Third District held in *Philip Morris, Inc. v. Janoff*, 901 So. 2d 141 (Fla. 3d DCA 2004), that both were impermissible. In *Janoff*, the court affirmed a trial court's decision to grant a new trial on the grounds that defense counsel impermissibly bolstered his expert's opinion on re-direct examination by asking his expert if any of the journals he found authoritative contained any scientific studies linking the plaintiff's disease (sinusitis) with the exposure that she claimed to have caused it (secondhand tobacco smoke). Neither the attorney nor the expert actually cited to any specific articles during re-direct. Rather, the attorney asked the expert which journals the expert believed to be authoritative and then proceeded to

ask the witnesses if any of those journals had published articles stating that exposure to secondhand smoke causes sinusitis.¹⁷

Fortunately or unfortunately, the *Janoff* court did not provide any rationale or explanation regarding why questions regarding the absence of literature constituted impermissible bolstering.¹⁸ Judge Green's dissenting opinion in *Janoff* also did not specifically address this issue.¹⁹

This recent extension of the definition of bolstering to include testimony regarding the absence of scientific literature seems troubling when viewed in combination with the concept of the pure opinion doctrine. In other words, pursuant to pure opinion, experts can provide opinions to the jury that have no support in the scientific literature and pursuant to Florida's anti-bolstering rule, the opposing party's expert is precluded from telling the jury that there is no scientific literature to support such an opinion. You may argue that, since neither witness gets to cite to literature, the jury can choose which expert to believe based on his or her expertise and the jury's perception of the experts. However, in some cases, especially cases in which experts are opining about general causation of disease, the expert who is linking an exposure with a disease has a decisive advantage.

For those of us who work with expert witnesses, we are frequently told “you can't prove a negative.” I once had an expert tell me that one could not prove that the moon wasn't made of cheese until Neil Armstrong stepped foot there and brought back samples. While I initially balked at this suggestion, it didn't take me long as a litigator to learn that there was an element of truth in his statement. If a witness simply gets to base his opinion that exposure to *X* causes cancer on his clinical expertise, then what basis can you, as a lawyer, give the jury for rejecting that expert's opinion? In most cases your own expert will be forced to concede that a causal link between exposure to *X* and cancer is biologically plausible, and has never been disproven. I certainly am not trying to imply that all

hope is lost under these circumstances or that these cases should be settled rather than tried. But there are real obstacles and challenges to overcome as a trial preparation strategy is developed.

If You Lose Your *Frye* Challenge, Is All Hope Lost?

No, all hope is not lost if you cannot successfully have the expert excluded. Two strategies to consider when confronting an expert whose opinion is not based on scientific literature are 1) to confront the opposing expert in deposition with a challenge; and 2) to prepare your own expert to tell the jury about the absence of literature on cross examination, assuming, of course, it is responsive to the question being asked.

First, with respect to the opposing expert's deposition, you may consider adding the following to your deposition outline when confronting an expert who has no scientific literature to support his or her opinion:

Q: Can you cite for me any scientific literature that supports your opinion?

A: No.

Q: Have you done a systematic review of the scientific literature to look for even one article that supports your opinion?

A: No.

Q: Prior to trial do you intend to do such a search?

A: No.

Q: Well, let me just tell you now that I intend to ask you at trial if you have found such an article, so you may want to look for one.

While that last statement may be objectionable because it is not a question, it could help set up a more powerful cross-examination about the absence of literature to support the expert's opinion. When you cross-examine the expert at trial and the expert still has not found an article supporting his opinion, the judge may let you ask the following questions which will also serve the purpose of putting the jury on notice that no such article exists:

Q: At the time you formed your opinions in this case that exposure to X causes cancer, you had not found a

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scientific article or study concluding that X causes cancer?

Q: And when we met on [date of deposition] to discuss your opinions, I told you that I was going to ask you at trial whether you have yet found such an article?

Q: And, you don't have one to show to me, do you?

Of course, these are risky questions if you are not familiar with the literature yourself and are not confident in the answers or at least your ability to deal on the fly with an article that the expert has, but really doesn't support his or her opinions. As litigators, many of us are — if nothing else — risk takers.

The second tactic of preparing your own expert to address the absence of literature is self-explanatory. Just be sure that your expert understands that such an answer *must* be responsive to the question asked and *not* simply volunteered at the first available opportunity. Neither of these strategies is fool-proof; but they may be worth considering.

Conclusion

It appears that, when applied jointly, Florida's rules and case law on pure opinion and bolstering provide land mines for lawyers who are trying cases about disease processes and causation that have not been studied in scientific literature. Lawyers should be aware of these issues and first and foremost try to place

the opposing expert's opinions under a *Frye* microscope as opposed to one founded in pure opinion. If this is not successful and the expert is permitted to testify, then lawyers need to be aware of the additional obstacles in confronting these experts at trial and ways to properly prepare for that confrontation. □

¹ This doctrine appears to have first been recognized by the Florida Supreme Court in *Flanagan v. State of Florida*, 625 So. 2d 827 (Fla. 1993).

² The *Frye* test refers to the test set forth by the U.S. Court of Appeals for the D.C. Circuit in 1923 in *Frye v. United States*, 293 F. 1013 (D.C. Cir. 1923), in which that court held that in order to introduce an expert's opinion that is deduced from scientific principle or discovery, the scientific principle or discovery "must be sufficiently established to have gained general acceptance in the particular field in which it belongs." *Frye*, 293 F. at 1014.

³ *Holy Cross*, 816 So. 2d at 1117.

⁴ See, e.g., *Gelsthorpe v. Weinstein*, 897 So. 2d 504 (Fla. 2d D.C.A. 2005) (Testimony of neurologist that infant's brain damage was caused by physicians failure to promptly perform Caesarian operation was based on clinical experience and, thus, not subject to a *Frye* analysis.); *Jones v. Goodyear*, 871 So. 2d 899 (Fla. 3d D.C.A. 2004) (Tire engineering expert's opinion regarding tire design defect was based on his experience designing tires and was, thus, not subject to *Frye* analysis.).

⁵ *Tursi*, 729 So. 2d at 997.

⁶ See, e.g., *Castillo v. E.I. Du Pont De Nemours*, 854 So. 2d 1264 (Fla. 2003) (Expert opinions that exposure to particular fungicide resulted in birth defects was subject to *Frye* test due to expert's reliance on animal studies and other scientific literature.); *Berry v. CSX Transportation*, 709 So. 2d 552 (Fla. 1st D.C.A. 1998) (Expert opinion that toxic encephalopathy caused by exposure to organic solvents was based on review of medical literature and epidemiological studies and, thus, subject to *Frye* analysis.).

⁷ In *Marsh v. Valyou*, 917 So. 2d 313 (Fla. 5th D.C.A. 2005), the Fifth District noted that, to date, the Florida Supreme Court appears to have limited application of *Frye* to experts who had relied on scientific literature to form their opinions.

⁸ The National Institutes of Health define fibromyalgia as "a disorder that causes muscle pain and fatigue." See www.niams.nih.gov/hi/topics/fibromyalgia/fffibro.htm.

⁹ *Johnson*, 880 So. 2d at 722.

¹⁰ *Marsh*, 917 So.2d at 723.

¹¹ *Id.* at 327.

¹² Of course, for some expert opinions, reliance on literature is not as useful or as important. For example, when a medical doctor is opining on the cell type of a patient's cancer or where that cancer originated in the patient's body, then literature is less

relevant. However, when the expert is offering an opinion regarding what caused the patient's cancer, it seems intuitive that there should be some scientific literature to support the expert's conclusions. The Fifth District made this point in its *Marsh* decision with respect to fibromyalgia opinions by explaining that certain opinions require an underlying scientific foundation that courts should examine under the *Frye* test: "An expert's opinion that a defendant is a schizophrenic is pure opinion testimony, as it is based on a conclusion drawn by the expert from clinical experience without the need for making any underlying assumptions. An expert is taught the symptoms of this disease and, based on his training and experience and his examination of the defendant, is permitted to testify that the defendant has the disease. Likewise, an expert would be permitted to testify that, based on his training and experience, a plaintiff suffers from fibromyalgia."

"This 'pure opinion' testimony where the experts were being asked to testify that the plaintiff's fibromyalgia was caused by trauma requires, however, an underlying scientific assumption — that trauma can cause fibromyalgia — which is not involved in pure opinion testimony cases. The underlying scientific principle (sometimes referred to as the issue of 'general causation') would appear to be subject to the tests established in *Frye* and/or *Daubert*. This type of opinion testimony also implies the infallibility of the basis of the opinion." *Marsh*, 917 So. 2d at 327.

¹³ Jeffrey S. Badgley, *Using Medical Literature on Direct Examination to Win the "Battle of the Experts"*, 77 FLA. B.J. 39 (May 2003).

¹⁴ Mike Trentalange, *Use of Learned Treatises on Cross-examination: Practical Considerations*, 79 FLA. B.J. 44 (July/August 2005).

¹⁵ See Badgley, *Using Medical Literature on Direct Examination to Win the "Battle of the Experts"*, 77 FLA. B.J. 39 (May 2003).

¹⁶ See *Philip Morris, Inc. v. Janoff*, 901 So. 2d 141 (Fla. 3d D.C.A. 2004).

¹⁷ In the interest of full disclosure, the author conducted the re-direct examination in the *Janoff* trial. I had originally asked the witness if, in his review of the scien-

tific literature, he had seen any scientific studies linking secondhand smoke exposure with sinusitis. The court, however, sustained an objection to that question and instructed me to first ask the witness what journals he deemed authoritative and then ask if he had found any articles linking secondhand smoke with sinusitis in those specific journals.

¹⁸ See *Janoff*, 901 So. 2d at 144, in which the court refers to this testimony as impermissible bolstering without specifically addressing appellant's argument that references to the "absence of literature" are not impermissible bolstering. "In the

instant case, on re-direct examination, defense counsel impermissibly bolstered Dr. Anderson's testimony by identifying specific authoritative publications and asking whether they lacked articles stating that exposure to [secondhand smoke] causes chronic sinusitis."

¹⁹ The focus of the dissenting opinion was Judge Green's belief that plaintiff's waived their objection to the testimony and that any error, if at all, was harmless because every expert who testified, including plaintiff's expert, agreed that there was no literature linking secondhand smoke with sinusitis. *Id.* at 145-148.

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Neil D. Kodsi is a shareholder with the law firm of Carlton Fields and practices in the toxic tort and products liability practice group in the firm's Miami office. He received his B.A. in 1988 from the University of North Carolina at Chapel Hill and his J.D. from Wake Forest University in 1991. He has taught pre-trial practice and procedure as an adjunct professor at the Wake Forest University School of Law.

This column is submitted on behalf of the Trial Lawyers Section, Mark P. Buell, chair, and D. Matthew Allen, editor.