

SCIENTIFIC EVIDENCE IN COURT: *DAUBERT* OR *FRYE*, 15 YEARS LATER

by

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Fifteen years ago, in *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993), the Supreme Court established a new standard for federal courts to apply when evaluating the admissibility of expert testimony. The Court held that the *Frye* “general acceptance” test, *see Frye v. United States*, 293 F. 1013 (D.C. Cir. 1923), was superseded by the Federal Rules of Evidence. Specifically, *Daubert* construed Rule 702 to impose on federal courts the gate-keeping responsibility of ensuring – before jurors hear expert testimony – that it is scientifically reliable, as well as relevant in the sense of having a valid scientific connection to the inquiry at issue. *See Daubert*, 509 U.S. at 589-92. The Supreme Court subsequently re-visited *Daubert*, holding that the “abuse of discretion” standard applies when appellate courts review *Daubert* rulings, *see General Elec. Co. v. Joiner*, 522 U.S. 136 (1997), and that the *Daubert* test applies to not only testimony based on “scientific” knowledge, but also testimony based on “technical” and “other specialized” knowledge within the meaning of Rule 702, *see Kumho Tire Co. v. Carmichael*, 526 U.S. 137 (1999). In 2000, Rule 702 was amended to codify the *Daubert* ruling. By requiring that expert testimony meet “exacting standards of reliability,” *Weisgram v. Marley Co.*, 528 U.S. 440, 455 (2000), the *Daubert* test has played an important role in minimizing the impact of junk science on lawsuits adjudicated in federal courts throughout the country.

However, fifteen years after *Daubert* was decided, juries in many state court lawsuits are exposed to expert testimony that has not been subjected to *Daubert* scrutiny. As discussed below, although some states have been firmly in the *Daubert* camp for several years and others are relatively recent converts, many states still apply the *Frye* test. A review of judicial opinions applying different admissibility standards shows that this issue can be important enough to determine the outcome of a lawsuit.

State Courts That Apply *Daubert*. Approximately half of the states apply the *Daubert* admissibility test, including Georgia, whose Supreme Court recently held that *Daubert* applies to civil litigation in that state. *See Mason v. Home Depot U.S.A., Inc.*, 658 S.E.2d 603 (Ga. 2008). In 2005, the Georgia General Assembly enacted tort reform legislation, including a provision that closely tracks Federal Rule of Evidence 702 and specifically authorizes Georgia courts presiding over civil cases to apply *Daubert* and other federal court opinions applying *Daubert* standards. *Mason*, 658 S.E.2d at 605-06 & n.1. The Georgia Supreme Court rejected constitutional attacks on this statute, *id.* at 606-10, and then affirmed the exclusion of plaintiffs’ experts’ opinions. In doing so, the court relied on a federal appellate court ruling applying the *Daubert* test:

The [plaintiffs] argue that since Dr. Ziem used the accepted medical methodology of differential diagnosis, the trial court could not properly find her methods to lack scientific support. However, “expert opinions employing differential diagnosis must be based on scientifically valid decisions as to which

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potential causes should be ‘ruled in’ and ‘ruled out.’ [Cit.]” *Ervin v. Johnson & Johnson, Inc.*, 492 F.3d 901, 904 (7th Cir. 2007).

Mason, 658 S.E.2d at 610-11 (alteration in original). The *Mason* ruling has already had an impact on admissibility rulings issued by lower courts in Georgia. See, e.g., *Hawkins v. OB-GYN Assocs., P.A.*, 660 S.E.2d 835, 837-38 (Ga. Ct. App. 2008) (affirming exclusion of plaintiff’s expert’s opinions; citing *Mason* and federal appellate court rulings applying *Daubert*).

In some states, courts decided to apply the *Daubert* scientific reliability standard relatively soon after the Supreme Court issued the *Daubert* ruling. For example, in 1995, the Texas Supreme Court said that it was “persuaded by the reasoning of *Daubert*” and required Texas courts to use the *Daubert* test when evaluating expert testimony. *E.I. du Pont de Nemours & Co. v. Robinson*, 923 S.W.2d 549, 556 (Tex. 1995). Since then, Texas courts have applied *Daubert* and *Robinson* in various contexts. See, e.g., *Kerr-McGee Corp. v. Helton*, 133 S.W.3d 245, 259 (Tex. 2004) (reversing judgment in lawsuit involving oil-and-gas lease because plaintiffs’ expert’s testimony should have been excluded and stating that “[t]he exacting standards for expert testimony set forth” in *Daubert* and *Robinson* “are well-known to Texas litigators”); *Gammill v. Jack Williams Chevrolet, Inc.*, 972 S.W.2d 713 (Tex. 1998) (affirming exclusion of plaintiffs’ expert testimony in automobile products liability lawsuit); *Merrell Dow Pharms., Inc. v. Havner*, 953 S.W.2d 706 (Tex. 1997) (reversing judgment in Bendectin products liability lawsuit because plaintiffs’ experts’ testimony should have been excluded).

Courts in Populous States That Apply Frye. Some state courts – including courts in many of this country’s most populous states – continue to apply the *Frye* general acceptance test. For instance, relatively soon after *Daubert* was decided, the California Supreme Court reaffirmed the vitality of the *Frye* test (also known as the *Kelly/Frye* test in that state) and declined to adopt the *Daubert* standard. See *People v. Leahy*, 862 P.2d 321 (Cal. 1994). Other states whose courts persist in applying the *Frye* test include: Florida, see *Marsh v. Valyou*, 977 So. 2d 543, 547 (Fla. 2007) (“Despite the Supreme Court’s decision in *Daubert*, we have since repeatedly reaffirmed our adherence to the *Frye* standard for admissibility of evidence.”), Illinois, see *People v. McKown*, 875 N.E.2d 1029, 1031 n.2, 1036 (Ill. 2007) (recognizing that *Frye* test applies in Illinois and declining to consider whether to adopt evidentiary standard set forth in *Daubert*), New York, see *Marso v. Novak*, 840 N.Y.S.2d 53, 54-55 (App. Div. 2007) (applying *Frye* test), and Pennsylvania, see *Grady v. Frito-Lay, Inc.*, 839 A.2d 1038, 1044-45 (Pa. 2003) (reaffirming adherence to *Frye* test and declining to adopt *Daubert* standard).¹

The “Pure Opinion” Loophole. Simply tallying up which states apply the *Daubert* test and which states apply *Frye* does not present an accurate picture of where various states set the admissibility hurdle for expert testimony. Unlike federal courts – which must apply Rule 702 and *Daubert* to all types of expert testimony – many state courts have different admissibility standards for different kinds of expert testimony. Thus, a defendant sued in a *Frye* state not only lacks the protections of the *Daubert* scientific reliability test but also may be barred from invoking the *Frye* general acceptance test to challenge the admissibility of plaintiff’s expert testimony.

The Florida Supreme Court’s *Marsh* ruling is a recent example of this problem. The defendants relied on the *Frye* test and asked the trial court to preclude the plaintiff from presenting expert testimony that several car accidents caused her fibromyalgia because the premise that trauma can cause fibromyalgia had not been generally accepted in the scientific community. *Marsh*, 977 So. 2d at 545. The trial court granted the defendants’ motion to exclude and entered summary judgment. After an intermediate appellate court affirmed, the Florida Supreme Court reversed based on the “pure opinion” rule: “Because testimony causally linking trauma to fibromyalgia is based on the experts’ experience and training, it is ‘pure opinion’ admissible without having to satisfy *Frye*.” *Id.* at 549. The Court explained that the *Frye* test “only applies when an expert attempts to render an opinion that is based upon new or novel scientific techniques.” *Id.* at 547 (emphasis in original; internal quotation marks omitted). Therefore, according to the Court, “*Frye* is inapplicable in the vast majority of cases.” *Id.* (internal

¹According to the most recent United States Census Bureau estimates (as of July 2007), the ten states with the largest populations are, in order: California, Texas, New York, Florida, Illinois, Pennsylvania, Ohio, Michigan, Georgia, and North Carolina. The *Frye* test applies in five of the six most populous states. The *Daubert* test applies in only four (Texas, Ohio, Michigan, Georgia) of the top ten states. North Carolina applies an admissibility standard that is neither a *Daubert* test nor a *Frye* test. See *Howerton v. Arai Helmet, Ltd.* 597 S.E.2d 674, 684-93 (N.C. 2004). As discussed below, the eleventh most populous state, New Jersey, applies the *Frye* test in some cases and another admissibility standard (neither *Frye* nor *Daubert*) in some cases.

quotation marks omitted). In this case, the Court held that the *Frye* test does not apply because the plaintiff's experts "did not base their opinions on new or novel scientific tests or procedures," but used a "differential diagnosis" methodology that "is a generally accepted method for determining specific causation." *Id.* at 549.

However, as demonstrated in the persuasive dissenting opinion, the majority opinion "broadens this supposedly narrow [pure opinion] exception way beyond its limited purpose." *Marsh*, 977 So. 2d at 560 (Cantero, J., Wells, J., Bell, J., dissenting). In other words, the majority focused on the specific causation opinion (whether trauma caused fibromyalgia in this plaintiff), but failed to recognize that the *Frye* test applies to the general causation opinion. As the dissent pointed out, when an expert's opinion "is based on an underlying scientific principle, that underlying principle is subject to *Frye*," and, in this case, the underlying scientific principle that must pass the *Frye* test "is that trauma *can* cause fibromyalgia." *Id.* at 561 (emphasis in original); *see also id.* at 562 ("This theory of general causation does not become admissible simply because it is the opinion of some experts that trauma caused Marsh's fibromyalgia."). The dissent characterized the majority opinion as a "sea change in Florida law" because the "holding that an [expert's] opinion about specific causation need not pass the *Frye* test, even where the underlying theory of general causation is not accepted, in effect renders specific causation testimony always admissible as the 'pure opinion' of the expert." *Id.* at 562; *see also id.* at 563 ("Permitting an expert to testify that X caused Y in a specific case without requiring the general acceptance of the theory that X can *ever* cause Y expands the 'pure opinion' exception to the point where it swallows the rule." (emphasis in original)); *id.* at 564-65 (explaining that, although "differential diagnosis is a generally accepted methodology for determining specific causation," differential diagnosis cannot be used to establish general causation). Finally, the dissent showed that the general causation theory does not satisfy the *Frye* test because the theory that trauma can cause fibromyalgia is not generally accepted. *See id.* at 565-71.²

The pure opinion exception to the *Frye* test is not limited to Florida state courts. For example, in a pharmaceutical products liability lawsuit involving Parlodel[®], the Kansas Supreme Court reversed a summary judgment ruling that was based on the exclusion of plaintiffs' experts' causation opinions under the *Frye* test. *See Kuhn v. Sandoz Pharms. Corp.*, 14 P.3d 1170 (Kan. 2000). The Kansas Supreme Court held that the causation opinions did not have to pass the *Frye* test because these experts – who used a differential diagnosis methodology and relied on their experience and training – were presenting pure opinion testimony. *See id.* at 1179-82.³

Thus, the *Kuhn* Court used very different reasoning and reached a very different result than federal appellate courts that have unanimously applied the *Daubert* test to affirm the exclusion of plaintiffs' experts' causation opinions in other Parlodel[®] lawsuits. For example, the Eighth Circuit ruled that plaintiff's experts "failed to produce scientifically convincing evidence that Parlodel causes vasoconstriction" and held that the district court properly "excluded the differential diagnoses performed by [plaintiff's] expert physicians because they lacked a proper basis for "ruling in" Parlodel as a potential cause of [intracerebral hemorrhage] in the first place." *Glastetter v. Novartis Pharms. Corp.*, 252 F.3d 986, 989 (8th Cir. 2001). The other two circuit courts that have evaluated causation opinions in Parlodel[®] cases affirmed similar *Daubert*-based exclusion rulings. *See Rider v. Sandoz Pharms. Corp.*, 295 F.3d 1194 (11th Cir. 2002); *Hollander v. Sandoz Pharms. Corp.*, 289 F.3d 1193, 1211 (10th Cir. 2002).

Different Admissibility Rulings in Accutane[®] Litigation. Recent rulings in pharmaceutical products liability litigation involving Accutane[®] also show a federal court excluding causation opinions under the *Daubert* standard and a state court applying a different admissibility test to hold that causation opinions are admissible. The federal Multidistrict Litigation court excluded the general causation opinion of a gastroenterologist (Dr. Fogel), who relied on several types of evidence to opine that the drug can cause Inflammatory Bowel Disease ("IBD"). *See In re Accutane Prods. Liab. Litig.*, 511 F. Supp. 2d 1288 (M.D. Fla. 2007). Although Dr. Fogel relied on animal studies, the court stated that he "ignores the parts of those studies that do not support his

²As the dissenting opinion stated, after reviewing studies on both sides of the causation issue: "I do not argue that these studies demonstrate that trauma does *not* cause fibromyalgia. My point is that no clear majority exists *either way*. Instead, the scientific community is in the middle of an ongoing and intense debate." *Marsh*, 977 So. 2d at 569 (emphasis in original).

³Moreover, the Kansas Supreme Court avoided grappling with the issue discussed in the *Marsh* dissent – whether pure opinion testimony based on a differential diagnosis can establish general causation – because the Kansas Supreme Court rejected the trial court's ruling that plaintiffs were required to prove general causation as well as specific causation. *Kuhn*, 14 P.3d at 1184-85.

opinion” and “draws conclusions not supported by the authors.” *Id.* at 1292. He also relied on causality assessments (purported admissions in the defendant’s internal documents), but the court held that his “willingness to reach conclusions based on documents that he does not understand indicates a bias of wanting to reach a particular conclusion.” *Id.* at 1297; *see also id.* (“It casts suspicion on whether he blindly followed a scientific trail until reaching a conclusion, or whether the conclusion came first and then a trail was identified.”). Finally, the court rejected the expert’s reliance on “challenge/dechallenge” case reports, pointing out that they “are still case reports and are entitled to little weight in supporting an opinion on causation.” *Id.* at 1300.

More recently, a New Jersey state court presiding over a lawsuit alleging that Accutane[®] caused IBD rejected a defense admissibility challenge to the causation testimony of another gastroenterologist (Dr. Sachar). *See McCarrell v. Hoffman-LaRoche, Inc.*, No. ATL-L-1951-03-MT (N.J. Super. Ct. Law Div. Feb. 8, 2008). Declining to “delineate the differences between *Daubert* and *Kemp* [*ex rel. Wright v. State*, 809 A.2d 77 (N.J. 2002)],” *McCarrell*, slip op. at 18, the *McCarrell* court applied the *Kemp* test – a “more flexible” admissibility standard that applies in New Jersey to cases where a theory of causation has “not yet reached general acceptance in the scientific community,” *Kemp*, 809 A.2d at 85. In those cases, the causation theory “may be found to be sufficiently reliable if it is based on a sound, adequately-founded scientific methodology involving data and information of the type reasonably relied on by experts in the scientific field.” *Id.* (internal quotation marks omitted).⁴ Unlike the federal court that excluded the causation testimony in the *In re Accutane* opinion, the *McCarrell* court allowed the jury to hear a causation opinion based on animal studies, *see* slip op. at 7-10, causality assessments from internal company documents, *see id.* at 14-17, and reports by physicians describing challenge/dechallenge/rechallenge events, *see id.* at 10-12. Although the defense admissibility challenge relied “heavily” on the *In re Accutane* ruling, the *McCarrell* court stated that a ruling “by a federal district Court sitting in Florida . . . is not binding precedent” and that the federal judge “did not have the same evidence before him as was presented in this Court.” Slip op. at 3.

Conclusion. Those who prefer a lenient admissibility standard for expert testimony often criticize the *Daubert* test by claiming that judges are not well-suited to conduct rigorous evaluations of complex scientific or technical evidence, but the Eleventh Circuit persuasively explained why *Daubert* scrutiny is necessary: “While meticulous *Daubert* inquiries may bring judges under criticism for donning white coats and making determinations that are outside their field of expertise, the Supreme Court has obviously deemed this less objectionable than dumping a barrage of questionable scientific evidence on a jury, who would likely be even less equipped than the judge to make reliability and relevance determinations and more likely than the judge to be awestruck by the expert’s mystique.” *Allison v. McGhan Med. Corp.*, 184 F.3d 1300, 1310 (11th Cir. 1999). Meticulous judicial review of expert testimony is especially important because: (a) “[p]rofessional expert witnesses are available to render an opinion on almost any theory, regardless of its merit”; (b) “some experts . . . are more than willing to proffer opinions of dubious value for the proper fee”; and (c) “[e]xpert witnesses can have an extremely prejudicial impact on the jury, . . . [which] more readily accepts the opinion of an expert witness as true simply because of his or her designation as an expert.” *Robinson*, 923 S.W.2d at 553 (internal quotation marks omitted).

The track record of federal judges applying the *Daubert* standard over the last fifteen years shows that they can usually learn enough about the science to reach an informed decision about whether an expert’s testimony is based on reliable scientific methods and has a valid scientific connection to the inquiry at issue. By “shifting the focus [of admissibility determinations] to the kind of empirically supported, rationally explained reasoning required in science,” the *Daubert* trilogy “has greatly improved the quality of evidence upon which juries base their verdicts.” *Rider*, 295 F.3d at 1197. However, too many juries in too many states still render verdicts based on expert testimony that is not supported by sound science and would not satisfy *Daubert*’s exacting standards of reliability.

⁴One court described this test as “a middle ground between the *Daubert* standard and a standard that would allow sympathetic plaintiffs with catastrophic injuries to recover against pharmaceutical manufacturers based upon nothing more than speculation and conjecture,” *In re Phenylpropanolamine (PPA)*, 2003 WL 22417238, at *22 (N.J. Super. Ct. Law Div. July 21, 2003) (unpublished op.) (internal quotation marks omitted), which “ensur[es] fair and objective standards when correctly applied by the court,” *id.*