The Florida Senate

Issue Brief 2009-331 *October 2008*

Committee on Judiciary

ANALYSIS OF LAW RELATING TO ADMISSIBILITY OF EXPERT TESTIMONY AND SCIENTIFIC EVIDENCE

Issue Description

The standards governing admissibility of scientific evidence by expert witnesses are often discussed in the context of two federal court cases. *Frye v. United States*, 293 F. 1013 (D.C. Cir. 1923), articulated what some scholars characterize as the "general acceptance" test, under which the evidence may be admitted if the court finds that it has "gained general acceptance in the particular field in which it belongs." That standard governed for most of the 20th Century until the U.S. Supreme Court articulated a different test in the case of *Daubert v. Merrell Dow Pharmaceuticals*, 509 U.S. 579 (1993). Under *Daubert*, and subsequent cases, the Court required federal trial judges to evaluate expert testimony based on factors such as testing, peer review, error rates, and acceptability in the relevant scientific community. The *Daubert* decision is cited for the principle that the judge should be a "gatekeeper" in the area of admission of scientific or similar evidence, and the decision has been embraced by some proponents of litigation reform as prescribing a tougher standard for admission of such evidence.

Because it was interpreting the Federal Rules of Evidence, the *Daubert* decision is binding on federal courts. In addition, it has been adopted by some state courts. Florida, however, follows the *Frye* standard. During the 2007 and 2008 regular sessions of the Florida Legislature, measures were introduced to move the state toward a standard and procedures closer to that articulated in and stemming from *Daubert.* [*See, e.g.*, SB 1960 (2007 Reg. Session) and SB 1448 (2008 Reg. Session).]

The purpose of this issue brief is to review the standards governing admissibility of scientific expert witness testimony based on the *Frye* and *Daubert* decisions and other relevant case law, in order to provide the senators with a foundation for evaluating policy proposals in this area. The issue brief also examines the extent to which evidence law in Florida may be prescribed in statute by the Legislature versus in rules by the Florida Supreme Court.

Background

In Florida, expert witness testimony is used when scientific, technical, or other specialized knowledge will assist the trier of fact in understanding the evidence or determining a fact in issue. Expert testimony is used in a wide variety of both criminal and civil actions ranging from issues involving, for example, DNA, blood samples, toxic molds, crime scene reenactments, and battered spouse syndrome. An expert is defined in the Florida Rules of Civil Procedure as "a person duly and regularly engaged in the practice of a profession who holds a professional degree from a university or college and has had special professional training and experience, or one possessed of special knowledge or skill about the subject upon which called to testify."[1] Thomas D. Sawaya, author of a Florida personal injury practice guide, points out that "[t]hese definitions distinguish expert witnesses from lay witnesses and establish the criteria that must be met in order for their opinions to be admitted into evidence and considered by the trier of fact."[2]

To qualify, an expert must demonstrate knowledge, skill, experience, training, or education in the subject matter.[3] If the subject matter involves new or novel scientific evidence, the party who wants to introduce expert opinion

[1] Fla. R. Civ. P. 1.390(a).
[2] Thomas D. Sawaya, *Florida Personal Injury Law and Practice with Wrongful Death Actions,* s. 24.12 (2007-08 edition).
[3] Section 90.702, F.S.

testimony on the evidence must show that the methodology or principle has sufficient scientific acceptance and reliability. This is what is known as the *Frye* standard.

Frye Standard

The U.S. Supreme Court adopted the *Frye* standard in 1923. At issue was the admissibility of an expert's testimony on the result from a systolic blood pressure deception test (an early form of a polygraph test) taken on a defendant who was accused of second-degree murder. The Court considered this test a new and novel scientific theory of its time and held that:

> while courts will go a long way in admitting expert testimony deduced from a well-recognized scientific principle or discovery, the thing from which the deduction is made must be sufficiently established to have gained general acceptance in the particular field in which it belongs.[4]

As a result of this standard, expert opinion testimony based on a new or novel scientific principle, theory, or methodology is admissible only when the scientific principle, theory, or methodology is generally accepted in the field in which it belongs. The procedures followed to apply the technique or process must also be generally accepted in the relevant scientific community.[5]

Florida first applied the *Frye* standard in 1989[6] when it evaluated whether refreshed posthypnotic testimony of a defendant accused of murder was admissible. In the case, the Florida Supreme Court examined the practicality and reliability of posthypnotic testimony by evaluating the history of its admissibility in what the Court described as a "rollercoaster ride through the courts."[7] While the Court acknowledged that the *Frye* test had come under some criticism since its inception in 1923 as too harsh and inflexible, it found that other recognized judicial approaches to admissibility of expert testimony on this particular subject were not applicable to this type of testimony.[8]

The *Frye* test since has been broken down into a four-step process as outlined by the Florida Supreme Court in *Ramirez v. State*[9]:

- First, the trial judge must determine whether such expert testimony will assist the jury in understanding the evidence or in determining a fact in issue.
- Second, the trial judge must decide whether the expert's testimony is based on a scientific principle or discovery that is "sufficiently established to have gained general acceptance in the particular field in which it belongs."
- Third, the trial judge must determine whether a particular witness is qualified as an expert to present opinion testimony on the subject in issue.
- Fourth, the judge may then allow the expert to render an opinion on the subject of his or her expertise, and it is then up to the jury to determine the credibility of the expert's opinion, which it may either accept or reject.

Professor Charles W. Ehrhardt, the author of a leading treatise on Florida evidence, explains that "not all expert testimony must be Frye-tested in order to be admissible….Expert opinion based solely on the expert's experience and training can be properly evaluated by the jury.[10] As recently as March 2008, the Florida Supreme Court reiterated this opinion in the case of *Marsh v. Valyou*.[11] In the case, the plaintiff sued her insurance company for

---

[4] *Frye v. United States*, 293 F. 1013, 1014 (D.C. Cir., 1923).
[5] Charles W. Ehrhardt, *Florida Evidence*, s. 702.3 (2006 edition).
[6] *Stokes v. State*, 548 So. 2d 188 (Fla. 1989).
[7] *Id*. at 190.
[8] *Id*. at 195.
[9] 651 So. 2d 1164, 1166-1167 (Fla. 1995).
[10] Charles W. Ehrhardt, *Florida Evidence*, s. 702.3 (2006 edition).
[11] *Marsh v. Valyou*, 977 So. 2d 543 (Fla. 2008).

refusing to cover medical treatment for her fibromyalgia, which she claimed was caused by four separate car accidents in a period of three years.

At issue in *Marsh* was whether the *Frye* test applied to expert testimony causally linking trauma to fibromyalgia. The Court held that it did not, stating that the expert medical causation testimony at issue was not "new" or "novel." Under the *Frye* test, the proponent of the evidence has the burden of establishing the general acceptance of the underlying scientific principle and methodology by a preponderance of the evidence.[12] The Court stated that the published classification criteria for fibromyalgia in 1990 from the College of Rheumatology found that fibromyalgia was "widely accepted as a common generalized pain syndrome associated with characteristic symptoms and the finding of generalized tenderness."[13]

The *Marsh* Court explained that when expert opinion testimony is not subject to the *Frye* test, it is still admissible to show causation when the opinion is based solely on the expert's training and experience. The Court stated that "[t]rial courts must resist the temptation to usurp the jury's role in evaluating the credibility of experts and choosing between legitimate but conflicting scientific views."[14]

Although this opinion is in line with preceding Florida Supreme Court opinions on the continued adherence to a *Frye* standard when applicable, of interest is the lengthy special concurrence by Justice Anstead on why the Florida Evidence Code should have superseded *Frye*. He stated:

> It is time for the judiciary system to recognize that the Evidence Code establishes a different standard in assessing the admissibility of novel scientific theories or techniques than does *Frye*. Their admissibility is not dependent solely upon proof that they have generally been accepted by the relevant field-although lack of general acceptance, when balanced against all counterweights, pursuant to section 90.403, is clearly a component to be considered in determining whether the probative value of such evidence is substantially outweighed by countervailing factors. If the challenged evidence, such as that in the present case, is logically relevant, and if balancing does not reveal it to be *substantially* outweighed by the factors enumerated in section 90.403, the trial judge should tip his hand in favor of admissibility.[15]

The Justice argued that the Florida Supreme Court has "never explained how *Frye* has survived the adoption of the rules of evidence."[16] He stated that the district courts have discussed the "tension between *Frye* and the terms of the Evidence Code" and reached the same conclusion the U.S. Supreme Court later reached in *Daubert*.[17]

Daubert Standard

The U.S. Supreme Court significantly changed the landscape for admissibility of scientific evidence when it issued its opinion in the case of *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993). At issue in *Daubert* was whether the Federal Rules of Evidence rather than the *Frye* standard should be used for admitting expert scientific testimony in a federal trial. Plaintiffs initially filed suit in the district court alleging that the birth defects of plaintiffs' two minor children were caused by the mother's ingestion of the prescribed drug Bendectin while she was pregnant. Summary judgment was granted for the defendant in the district court based on the affidavit of a "well-credentialed" expert who concluded that the Bendectin had not been shown to be a risk factor for human birth defects despite the eight affidavits presented by the plaintiffs which showed that in animal studies birth defects had resulted from the ingestion of Bendectin.

---

[12] *Id.* at 547.
[13] *Id* at 548 (quoting Frederick Wolfe, et al., *The Fibromyalgia Syndrome: A Consensus Report on Fibromyalgia and Disability*, 23 J. Rheumatology 534 (1996)).
[14] *Id.* at 549.
[15] *Id.* at 556 (quoting from Judge Ervin's concurring opinion in *Hawthorne v. State*, 470 So. 770 (Fla. 1st DCA 1985)).
[16] *Id.* at 551.
[17] *Id.* at 554.

The U.S. Supreme Court held that the adoption of the Federal Rules of Evidence superseded the *Frye* test.[18] The Court explained that "under the Rules the trial judge must ensure that any and all scientific testimony or evidence admitted is not only relevant, but reliable."[19]

When there is a proffer of expert testimony, the Court stated, a judge must make "a preliminary assessment of whether the reasoning or methodology underlying the testimony is scientifically valid and of whether that reasoning or methodology properly can be applied to the facts in issue."[20] The Court presented some general observations about which factors would be involved in making the assessment:

- Whether the scientific methodology can be (and has been) tested;
- Whether the theory or technique has been subjected to peer review and publication;
- Whether in the case of a particular scientific technique, the court ordinarily should consider the known or potential rate of error; and
- The existence and maintenance of standards controlling the technique's operation.

Two subsequent cases, *General Electric, Co. v. Joiner* and *Kumho Tire Co. v. Carmichael*, have added to these observations in *Daubert* (often referred to as the *Daubert* triology) and ultimately resulted in an amendment to the Federal Rules.[21] In *General Electric Co. v. Joiner,* the Court held that abuse of discretion is the appropriate standard of review for an appellate court to apply when reviewing a trial court's decision to admit or exclude expert testimony under *Daubert*.[22] In *Kumho Tire Co. v. Carmichael*, the Court held that the trial court's gatekeeping obligation is not limited to scientific testimony but extends to all expert testimony. It also held that a trial judge is not bound by the specific factors enumerated in *Daubert*, but can consider other factors, depending on the particular circumstances of the particular case at issue.[23]

In 2000, Federal Rule of Evidence 702 was amended "in response to these decisions to recognize that the court's gatekeeping function extended to all expert testimony to ensure that testimony is the product of reliable principles and methods, and that the expert witness has applied the principles and methods reliably to the facts of the case."[24]

Federal Rule 702 v. Florida Rule of Evidence 90.702

Federal Rule of Evidence 702 and Florida Rule of Evidence 90.702 are similar except for the amendments made to the federal rule subsequent to the *Daubert* decision and the cases that followed and applied *Daubert*.[25] Both rules essentially provide that:

> If scientific, technical, or other specialized knowledge will assist the trier of fact in understanding the evidence or in determining a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education may testify about it in the form of an opinion….[26]

The amendment to the federal rule in 2000 added language to reflect the opinion in *Daubert* along with the cases that followed, which language provides that: [27]

> … 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.

---

[18] *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993).
[19] *Id*. at 589.
[20] *Id.* at 592-593.
[21] *Kumho Tire Co. v. Carmichael*, 526 U.S. 137 (1999), and *General Electric Co. v. Joiner*, 522 U.S. 136 (1997).
[22] *General Electric Co.*, 522 U.S. at 139.
[23] *Kumho Tire Co*, 526 U.S. at 147-152.
[24] Charles W. Ehrhardt, *Florida Evidence*, s. 702.4 (2006 edition).
[25] Federal Rule of Evidence Rule 702, Advisory Committee Notes for 2000 Amendments.
[26] Citing Florida Rule of Evidence 90.702.
[27] *Id.*

Florida Rule of Evidence 90.702 requires simply that the "opinion is admissible only if it can be applied to evidence at trial."

Frye and *Daubert* in the United States

While some advocacy groups and scholars differ on how many states still maintain the *Frye* standard and how many have transitioned to the *Daubert* standard, below is a chart indicating what Senate professional staff's research found to be the most accurate representation on this issue.[28]

States accepting Daubert	***States maintaining the Frye standard***	***States using a hybrid standard of Daubert***
Alaska	Arizona	Alabama
Arkansas	California	Colorado
Connecticut	Florida	Hawaii
Delaware	Illinois	Idaho
Georgia	Kansas	Iowa
Indiana	Maryland	Maine
Kentucky	New York	Minnesota
Louisiana	North Dakota	Missouri
Massachusetts	Pennsylvania	Nevada
Michigan	Washington	New Jersey
Mississippi		North Carolina
Montana		Rhode Island
Nebraska		South Carolina
New Hampshire		Tennessee
New Mexico		Utah
Ohio		Vermont
Oklahoma		Virginia
Oregon		
South Dakota		
Texas		
West Virginia		
Wyoming		

Advocates for changing Florida's law to a *Daubert* standard argue that *Daubert* is a stronger standard that will ensure that judges' and juries' decisions are based on sound science. They argue that the *Frye* standard, commonly referred to as "the general acceptance test," applies to the methodology of the expert and not to his or her opinion, reasoning, and conclusions. The result of this test, advocates argue, is the admission of testimony of almost any reputed expert. *Daubert* proponents further reason that if judges are not allowed to be gatekeepers, they are "largely powerless to consider the reliability of an expert's reasoning or the connection between an expert's conclusions and the supporting scientific principles."[29]

These advocates suggest that because the Florida Legislature is responsible for seeing that the state's judges properly handle expert evidence, adoption by the Legislature of the American Legislative Exchange Council's model will strengthen the integrity of Florida courts by replacing the *Frye* standard with the more stringent standard found in *Daubert*.[30] They state that this model act will "require judges to consider whether an expert's

[28] Wisconsin has its own test. See *Wisconsin v. O. Walstad*, 351 N.W. 2d. 469, 486-487 (Wis. 1984).
[29] *Florida's Antiquated Frye Rule Allows Junk Science Into Our Courts*, White Paper from Florida Justice Reform Institute, 2008.
[30] The American Legislative Exchange Council has provided language for a model act on expert testimony, which can be found at its website under the heading Model Legislation and the subheading Civil Justice. See

testimony is reliable, relevant and has been subject to peer-review."[31] This will in turn, the advocates argue, give Florida lawmakers "the ability to ensure that expert testimony submitted to our state courts is reliable and not merely based on speculation and opinion but is based on sound science for the purpose of serving justice in Florida courts."[32]

Those opposed to adopting a *Daubert* standard in Florida raise concerns about the impact on the courts system. The *Daubert* standard, they argue, has "proven to be too difficult, time-consuming, burdensome, and costly for courts to apply."[33] Thus, they argue, requiring the judges to be "gatekeepers" in a system with limited judicial time and resources does not make sense. These advocates for keeping Florida a *Frye* state argue that "the *Frye* Standard ensures that scientific evidence meets an acceptable level of reliability without placing an impossible burden on judges."[34]

Frye advocates argue that since there is no current crisis in Florida, there is no need to change the existing law that has been effect for decades and "has had the desired effect of screening out 'junk science' based on questionable scientific methods and techniques."[35]

In practice, however, it may be difficult to discern which standard is the "better standard." In a 2003 Minnesota law review article, the author compared and contrasted the criteria for admissibility for three types of scientific evidence used in criminal proceedings in *Frye* and *Daubert* states in order to determine if either standard is "more determinative" of admissibility of scientific evidence.[36] Although there were significant differences in courts' decisions on the admissibility in two of the types of evidence studied, the author found that these differences could not be attributed to the *Frye* or *Daubert* standards.

The author found that:

> Frye and Daubert opinions have considerable commonality in their concerns and practical solutions. Both recognize the challenge in defining the point at which experimental science, which is constantly evolving, becomes sufficiently firm to aid in the resolution of a specific legal dispute.[37]

The author points out that not only is the "general acceptance" standard in *Frye* also the fourth guideline in *Daubert*, but the importance of acceptance in the larger scientific community extends to other guidelines enumerated in *Daubert* as well, including an aspect of the definition of scientific knowledge and the latitude granted expert witness in their testimony.

In a 2005 University of Virginia Law Review article, the authors conducted statistical studies for purposes of determining whether adoption of a *Frye* or *Daubert* standard in state courts has had any practical impact in tort cases. Noting that in federal courts "*Daubert* has become a potent weapon of tort reform by causing judges to scrutinize scientific evidence more closely," especially in the areas of medical malpractice, products liability, and toxic torts, the authors found that Daubert decisions in this context "have been decidedly pro-defendant" by allowing defendants to exclude certain types of scientific evidence. [38]

---

http://www.alec.org/am/template.cfm?section=home.

[31] *Florida's Antiquated Frye Rule Allows Junk Science Into Our Courts*, White Paper from Florida Justice Reform Institute, 2008.

[32] *Id.*

[33] *The Daubert standard is the wrong choice for Florida,* White Paper from Florida Justice Association (received in 2008 by professional staff of the Senate Committee on Judiciary).

[34] *Id.*

[35] *Id.*

[36] Pamela J. Jensen, *Frye Versus Daubert: Practically the Same?*, 87 MINN. L. REV. 1579 (2003).

[37] *Id.* at 1584.

[38] Edward K. Cheng and Albert H. Yoon, *Does Frye or Daubert Matter? A Study of Scientific Admissibility Standards,* 91 VA. L. REV. 471, 471-473 (2005).

With regard to state courts, the authors conducted both a preliminary study of Connecticut and New York, as well as in-depth statistical national study of all available and relevant states, and examined whether formal, doctrinal standards have any effect on scientific admissibility determinations. The authors concluded that there was no evidence that *Frye* or *Daubert* standards made a difference.[39]

Changing the Evidence Code

When the Legislature passes bills to amend the Florida Evidence Code, the Florida Supreme Court has jurisdiction under Article V, s. 2(a), Fla. Const., to determine whether the amendments should be adopted as a rule of court. The Legislature may repeal the rule by general law enacted by two-thirds vote of the membership of each house. Generally, the Legislature has jurisdiction over substantive matters, and the Florida Supreme Court over procedural matters.[40]

The Court concluded that substantive law includes those rules and principles that fix and declare the primary rights of individuals as respect their persons and their property, while procedure includes the administration of the remedies available in cases of invasion of primary rights of individuals.[41] The Court has stated: "In the past, recognizing that the Florida Evidence Code is both substantive and procedural in nature, this Court has adopted the Evidence Code as originally enacted as well as later amended by the Legislature."[42]

However, the Court has on occasion declined to adopt amendments enacted by the Legislature. In 2000, it declined to adopt an amendment by the Legislature to the Hearsay Rule, s. 90.803(22), F.S., stating that it "is not based on well established law; nor is it modeled after the Federal Rules of Evidence."[43] The Court stated that it would wait until a case came before it challenging the rules' constitutionality before it would address whether the rule was substantive or procedural.[44] The rule was challenged in 2003, and the Court held that it violated the Confrontation Clause of the Sixth Amendment in criminal proceedings to the extent that it allows the prosecutor to use at trial a witness's testimony from a previous judicial proceeding without a showing by the prosecutor that the witness is unavailable.[45] Professor Ehrhardt points out, however, that the decision does not affect the application of the section to civil cases or when it is used by a defendant in criminal proceedings.[46]

Past Legislative Efforts

During the 2007 and 2008 regular sessions of the Florida Legislature, measures were introduced in the House and Senate to move the state toward a standard and procedures closer to that articulated in and stemming from *Daubert.* [*See, e.g.,* SB 1960/HB 1017 (2007 Reg. Session) and SB 1448/HB 645 (2008 Reg. Session).]

In the 2007 session, House and Senate members filed similar bills, both with the short title of "Junk Science Elimination Act." Both bills died in committee. In 2008, House and Senate members filed identical bills. The bills provided a three-part test for determining whether or not expert testimony is admissible in a particular case. Under the bills, the testimony would be admissible if the following factors were true: 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. There was also language providing for pre-trial hearings on admissibility of the testimony and for rulings on interlocutory appeals regarding the admission or exclusion of the expert testimony. The Senate bill died in the Committee on Judiciary without being placed on a committee agenda, while the House bill was placed on an agenda twice but temporarily deferred in the first meeting and not considered in the second.

---

[39] *Id.* at 511.
[40] A*llen v. Butterworth*, 756 So. 2d 52, 59 (Fla. 2000).
[41] *Id*. at 60.
[42] In re *Amendments to the Florida Evidence Code*, 782 So. 2d 339 (Fla. 2000).
[43] *Id.* at 342.
[44] *Id.* at 341.
[45] *State v. Abreu*, 837 So. 2d 400, 406 (Fla. 2003).
[46] Charles W. Ehrhardt, *Florida Evidence*, s. 102.1 (2006 edition).