

EXPOSING JUNK SCIENTISTS IN COURT

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Some cases are fact cases and the jury is only asked to decide what the facts are based upon the competing testimonies of fact witnesses. Some cases are law cases, where a Judge must determine, as a matter of law, who prevails based upon an undisputed factual background. More and more often, cases are science cases, where both the Judge and the jury must receive and rely upon scientific testimony of expert witnesses in fulfilling their respective roles.

Most science cases involve dual causation issues. The initial causation issue is general or legal causation. That is, can the product, substance, or conduct cause the type of injury about which the plaintiff complains? If so, then the focus turns to specific or medical causation. That is, did the product, substance, or conduct cause the plaintiff's injury?

More and more often, these cases are attracting junk scientists -- practitioners of litigation science whose only real expertise is in reaching opinions about which they can charge hefty fees to testify. One author has given a very apt description of the subject matter of such expertise:

The art of junk science is to brush away just enough detail to reach detailed conclusions, while

preserving enough to maintain an aura of authoritative science.

Peter W. Huber, Galileo's Revenge: Junk Science in the Courtroom, p. 157 (1991). Mr. Huber's work offers great insight into the invasion of illegitimate scientific theories into the courtroom, and details some of the most egregious examples, including Bendectin, the Audi sudden acceleration cases, traumatic cancer, chemical aids, and multiple chemical sensitivity syndrome.¹

If your practice is devoted to cases premised on theories that are on the scientific fringe, this presentation will be of little interest to you. We are interested today in what to do when those theories appear on the other side

¹If you question whether junk science in the courtroom has been a problem, read any or all of these cases: In re Air Crash Disaster at New Orleans, 795 F.2d 1230 (5th Cir. 1986)(aviation and economist experts); Wells v. Ortho Pharmaceutical Corp., 788 F.2d 741 (11th Cir. 1986)(birth defects caused by spermicide); Elam v. Alcolac, Inc., 765 S.W.2d 42 (Mo. App. 1988)(chemical aids); Norris v. Gatts, 738 P.2d 344 (Alaska 1987)(Audi sudden acceleration); Menendez v. Continental Insurance Co., 515 So.2d 525 (La. App. 1987)(clinical ecology); Grayson v. Gulf Oil Co., 357 S.E.2d 479 S.C. App. 1987)(clinical ecology); Moore v. Polish Power, Inc., 720 S.W.2d 183 (Tex. Civ. App. 1986)(clinical ecology); Lorenc v. Chemirad Corp., 179 A.2d 401 (N.J. 1962)(cancerphobia); White v. Valley Land Co., 322 P. 707 (N.M. 1958)(bone cancer caused by heavy lifting); Menarde v. Philadelphia Transportation Co., 103 A.2d 681 (Pa. 1954)(trauma-induced breast cancer); National Dairy Products Corp. v. Durham, 154 So.2d 752 (Ga. App. 1952)(testicular cancer from seat belt injury); Barry v. Chaplin, 169 P.2d 442 (Cal. 1946)(paternity suit); Gaetz v. City of Melrose, 193 N.W. 691 (Minn. 1923)(abdominal cancer caused by police assault during an arrest); Canon Reliance Coal Co. v. Industrial Commission, 211 P. 868 (Colo. 1922)(cancer from blow to face); Everett v. Paschall, 111 P. 879 (Wash. 1910)(fear of tuberculosis contagion).

of your case, presented by an expert with impeccable qualifications and unshakable demeanor. In such cases your handling of the junk science expert will likely determine the outcome of your case.

Fortunately, there is a great deal of law to provide a foundation for your effort. We are permitted to hold the expert to a consensus standard; we are allowed to require him or her to demonstrate that the opinion offered is in the scientific mainstream. Since 1923, in most federal and state courts, it has been the responsibility of proponents of scientific testimony to establish that the premise, test, or analysis upon which the opinion is based is "sufficiently established to have gained general acceptance in the particular field in which it belongs." Frye v. United States, 293 F. 1013 (D.C. Cir. 1923). The so called Frye rule enjoyed recognition and application in a number of jurisdictions for over 70 years, and it set the standard by which the admissibility of scientific expert testimony has been evaluated in Alabama since 1980. See ex parte Dolvin, 391 So.2d 677 (Ala. 1980).

As scientific cases became more and more prevalent, the Frye rule was looked to more and more and became the primary weapon by which expert testimony was challenged -- and by which summary judgment was granted -- in such cases. See, e.g., Christophersen v. Allied-Signal Corp., 939 F.2d 1106 (5th Cir. 1991); Slaughter v. Southern Talc Co., 919 F.2d 304

(5th Cir. 1990); Brock v. Merrill-Dow Pharmaceuticals, 874 F.2d 307 (5th Cir. 1989); Washington v. Armstrong World Industries, 839 F.2d 1121 (5th Cir. 1988); Viterbow v. Dow Chemical Company, 826 F.2d 420 (5th Cir. 1987); Mazur v. Merck & Co., 942 F. Supp. 239 (E.D. Pa. 1990); Cadarian v. Merrill-Dow Pharmaceuticals, 745 F. Supp. 409 (E.D. Mich. 1989); Graham v. Canadian National Railway Co., 749 F. Supp. 1300 (D. Vt. 1990); In re Agent Orange Product Liability Litigation, 611 F. Supp. 1223 (E.D. N.Y. 1985), *cert. denied*, 487 U.S. 1234 (1988); Johnston v. United States, 597 F. Supp. 374 (D. Kan. 1984).

The Frye standard escaped Supreme Court review until 1993, when the issue was squarely presented in Daubert v. Merrill-Dow Pharmaceuticals, Inc., 509 U.S. 579, 113 Sup. Ct. 2786 (1993). In Daubert, the Court concluded that the Frye rule did not survive the 1975 adoption of the Federal Rules of Evidence, 113 Sup. Ct. at 2794, but the Court adopted a framework by which the admissibility of such expert testimony should be evaluated. The Court emphasized that Fed. R. Evid. 702 requires that the subject of the expert's testimony must be scientific knowledge, and that it is therefore incumbent upon the trial judge to assess whether the expert is testifying to scientific knowledge and, further, whether such testimony will be helpful to the jury. In making these assessments, federal trial judges should be guided by five factors articulated by the Supreme Court:

- (1) Whether the theory or technique in question can be (and has been) tested;
- (2) Whether the theory or technique has been subjected to peer review and publication;
- (3) Its known or potential error rate;
- (4) The existence and maintenance of standards controlling its operation; and
- (5) Whether the reasoning or methodology has attracted widespread acceptance within the relevant scientific community [the Frye test updated].

Daubert, 113 Sup. Ct. at 2796-97. The Court made it clear that its list was not exclusive. Id.

Whether you are in federal court or a state court in which Daubert is controlling, or in a state court still at hearing to Frye, you have a powerful weapon to start your assault upon the junk scientist at trial.

When do you attack? Early and often: (1) a motion for summary judgment; (2) a motion in limine; (3) a motion to exclude the evidence pursuant to Rule 104 of the Alabama or Federal Rules of Evidence; (4) during voir dire of the expert during your opponent's direct examination of the expert; and (5) during cross-examination of the expert.

How do you attack? Preparation . . . Preparation . . . Preparation . . .
The framework set forth by the Supreme Court as modified by other courts is a general road map, and you must be prepared to present favorable evidence on each of these factors.

The focus should be upon the expert's methodology -- that is, did he or she reach the opinion in a fashion and by methods typically relied upon by scientists in that field. In a recent case in which I was deposing a chemist who proposed to pass himself off as a toxicologist, I asked him the following questions regarding each of the opinions that he proposed to testify about at trial:

- Can you identify any scientific treatise, textbook, article, or other scientific literature that promotes or recommends the process or methodology that you followed in reaching this opinion?
- Can you identify any other chemist or toxicologist who espouses or promotes or recommends following the process or methodology that you followed in reaching this opinion?
- Have you authored any article or study in any peer-reviewed literature expressing this opinion?
- Have you seen it expressed in any peer-reviewed literature?
- Have you tested this opinion or any of the assumptions upon which is was based and, if so, how?
- Is there any community of scientists that generally accept this opinion or the assumptions upon which it is based?

Try it. These questions will make even the smoothest pseudoscientist very uncomfortable. Remember that it is the methodology that you must attack, and not the opinion. For if the expert has followed an appropriate methodology in the field, there is no Rule 702 basis to challenge any opinion that is reached.

Obviously, your design of your deposition examination of the opposing expert will depend upon the facts of each case, the legitimate science, and the science as the witness wishes to present it. This is usually your only chance to develop and store the ammunition you will need later to effectively challenge the expert before your trial judge. Get yourself a good, legitimate, expert and find out from him or her what the real science is and where the junk scientist has abandoned the scientific method. If you can convince the opposing expert that you know something about the science and the legitimate methodology, you can substantially increase the expert's discomfort level, and your deposition transcript will likely be a very helpful exhibit in your later efforts to exclude the testimony of such expert.