IN THE

COURT OF APPEALS OF MARYLAND

SEPTEMBER TERM, 2004

PETITION DOCKET # 460

CSX TRANSPORTATION, INC.,

Petitioner,

v.

DONALD E. MILLER,

Respondent.

ON WRIT OF CERTIORARI TO THE COURT OF SPECIAL APPEALS OF MARYLAND

BRIEF OF *AMICI CURIAE*, MARYLAND DEFENSE COUNSEL, INC. AND THE NATIONAL ASSOCIATION OF MANUFACTURERS

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TABLE OF CONTENTS

TABLE OF AUTHORITES

CASES **PAGE**

RULES

ADDITIONAL AUTHORITIES

STATEMENT OF THE CASE

Amicus curiae Maryland Defense Counsel, Inc. ("MDC") is a statewide voluntary organization of defense lawyers that promotes the efficiency of our civil litigation system and fair and equal treatment for all under the law. *Amicus curiae* The National Association of Manufacturers ("NAM") is an organization whose mission is to enhance the competitiveness of manufacturers by shaping a legislative and regulatory environment conducive to U.S. economic growth and to increase understanding among policymakers, the media and the general public about the vital role of manufacturing to America's economic future and living standards. MDC and NAM adopt Petitioner's Statement of the Case.

QUESTION PRESENTED

Should this Court provide Maryland courts a coherent methodology for applying the relevance and reliability standards of Rules 5-702 and 5-703 to determine the admissibility of expert testimony, thereby ensuring the fair and consistent application of the Rules of the Evidence?

STATEMENT OF FACTS

Amici Curiae MDC and NAM adopt Petitioner's Statement of Facts.

ARGUMENT

The worlds of science and law are converging at a greater pace than the rigid and limited dictates of Frye/Reed can adequately manage. We have had Maryland Rules 5-702 and 5-703 to guide us for ten years, and yet the courts have not articulated a uniform method for applying these rules. Maryland courts,

instead, have clung steadfastly to the common law of "general acceptance" in the face of a growing majority of states that have adopted the methodology provided by the federal courts in Daubert and its progeny.[1] MDC and NAM respectfully suggest that the time has come for this Court to provide a consistent framework of analysis for relevance and reliability for the trial courts to apply in exercising discretion to admit expert testimony under Rules 5-702 and 5-703.

I. MARYLAND RULES 5-702 AND 5-703 REQUIRE AN ANALYSIS OF RELEVANCE AND RELIABILITY IN DETERMINING THE ADMISSIBILTY OF EXPERT EVIDENCE.

Maryland Rules 5-702[2] and 5-703[3] govern the admissibility of expert testimony. The tools for determining the relevance and reliability, and resulting

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[1] See Daubert v. Merrell Dow Pharmaceuticals, Inc., 509 U.S. 579, 591-93; 113 S. Ct. 2786, 2796-97 (1993) (interpreting Federal Rule of Evidence 702 to require trial judges to act as gatekeepers and consider such factors as: (1) a technique's known or potential error rate; (2) whether the theory or technique can be or has been tested; (3) whether it has been subject to peer review and publication; and (4) its general acceptance.); General Electric Co. v. Joiner, 522 U.S 136; 118 S. Ct. 512 (1997); Kumho Tire v. Carmichael, 526 U.S. 137; 119 S. Ct. 1167 (1999).

[2] Rule 5-702:

> Expert testimony may be admitted, in the form of an opinion or otherwise, if the court determines that the testimony will assist the trier of fact to understand the evidence or to determine a fact in issue. In making that determination, the court shall determine (1) whether the witness is qualified as an expert by knowledge, skill, experience, training, or education, (2) the appropriateness of the expert testimony on the particular subject, and (3) whether a sufficient factual basis exists to support the expert testimony.

[3] Rule 5-703:

> (a) In general. The facts or data in the particular case upon which an expert bases an opinion or inference may be those perceived by or made known to the expert at or before the hearing. If of a type reasonably relied upon by experts in the particular field in forming opinions or inferences upon the subject, the facts or data need not be admissible in evidence.

admissibility of an expert witness's proffered testimony, are contained within these rules. These standards both inform and constrain the trial court's exercise of discretion.

The first sentence of Rule 5-702 and the language of 5-702(2) set forth the relevance standard for expert testimony in Maryland courts. The trial court must first determine that "the testimony will assist the trier of fact to understand the evidence or to determine a fact in issue." This language, in conjunction with 5-702(2), which provides that the court "shall determine...the appropriateness of the expert testimony on the particular subject," requires the trial court to determine if the proffered testimony is relevant and not otherwise excluded. Maryland Rule 5-403 provides for the exclusion of otherwise relevant evidence where its probative value is outweighed by "the danger of unfair prejudice, confusion of the issues, or misleading the jury, or by considerations of undue delay, waste of time, or needless presentation of cumulative evidence." Maryland Rule 5-403.

The relevance standard set forth in Rule 5-702 expands upon the definition of relevance that applies generally to all evidence in Maryland. See Maryland

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[3] (con't)

(b) Disclosure to jury. If determined to be trustworthy, necessary to illuminate testimony, and unprivileged, facts or data reasonably relied upon by an expert pursuant to section (a) may, in the discretion of the court, be disclosed to the jury even if those facts and data are not admissible in evidence. Upon request, the court shall instruct the jury to use those facts and data only for the purpose of evaluating the validity and probative value of the expert's opinion or inference.

(c) Right to challenge expert. This Rule does not limit the right of an opposing party to cross-examine an expert witness or to test the basis of the expert's opinion or inference.

Rule 5-401 ("'Relevant evidence' means evidence having any tendency to make the existence of any fact that if of consequence to the determination of the action more probable or less probable than it would be without the evidence."). All proffered expert testimony must meet both the relevance requirement provided in Rule 5-401 and that provided in Rule 5-702. If the relevance requirement of Rule 5-702 is not met, the evidence is not admissible. See Maryland Rule 5-402 ("Evidence that is not relevant is not admissible.").

Once established as relevant, expert testimony still may be excluded if it does not meet the reliability requirements set forth in Rules 5-702 and 5-703. Rule 5-702(3) requires the trial court to determine "whether a sufficient factual basis exists to support the expert testimony." Maryland Rule 5-702(3). The "sufficient factual basis" required by Rule 5-702 is described in Rule 5-703(a). "The facts or data in the particular case upon which an expert bases an opinion or inference may be those perceived by or made known to the expert at or before the hearing. If of a type *reasonably relied upon by experts in a particular field in forming opinions or inferences upon the subject*, the facts or data need not be admissible in evidence." Maryland Rule 5-703(a). Maryland Rules 5-702 and 5-703 require that expert testimony be based upon a sufficient foundation of both knowledge of the underlying facts of the particular case and the general principles or method used in forming the opinion. If the reliability requirements of Rules 5-702 and 5-703 are not satisfied, the admission of such testimony will be a waste of

time, at best, and at worst, misleading to the jury, and must be excluded pursuant to Rule 5-403.

The trial court's discretion to admit expert evidence does not begin to operate until after the court finds the evidence both relevant and reliable under Rules 5-702 and 5-703. The Rules do not provide trial courts the discretion to admit expert evidence that is neither relevant nor reliable. On appeal, the trial court's decision will be affirmed absent a manifest abuse of its discretion and the reviewing court will defer to the trial court's findings of relevance and reliability supporting that decision unless clearly erroneous. See Wood v. Toyota, 134 Md. App. 512, 520, 760 A.2d 315 (2000); Troja v. Black & Decker Mfg Co., 62 Md. App. 101, 110, 488 A.2d 516 (1985), *cert denied*, 303 Md. 471, 494 A.2d 939 (1985). This substantial appellate deference to the trial court makes all the more compelling the need to provide comprehensive guidance on how trial courts should approach expert evidence, especially reinforcing the need for trial courts to enter findings of relevance and reliability before admitting expert evidence.

II. MARYLAND COURTS ARE NOT APPLYING RULES 5-702 AND 5-703 CONSISTENTLY.

Maryland case law concerning expert evidence is confused and burdened by the tension that has developed between the clear mandate of the Maryland Rules of Evidence and the growing body of federal and state case law applying comparable rules, on the one hand, and Maryland's pre-Rules considerations of "general acceptance," on the other. As a result of this confusion, the goals of the

evidence rules are not being met. This Court should ensure that the courts construe and apply Rules 5-702 and 5-703 "to secure fairness in administration, eliminate unjustifiable expense and delay, and promote the growth and development of the law of evidence to the end that the truth may be ascertained and proceedings justly determined." Maryland Rule 5-102.

The Rules make clear that a court's discretion is bounded both by the "fit" of the evidence to the issue (relevance) and by the proof of the reliability of the evidence. The Maryland Rules require the trial court to review relevance and reliability in determining whether to admit expert evidence. The required inquiry regarding the proffered testimony's reliability, unfortunately, has had differing incantations in Maryland courts, most recently by the panel opinion below. The result is that trial courts are left without a cohesive approach for determining the admissibility of an expert's opinion.

A. The Court of Special Appeals Has Not Provided a Consistent Methodology for Determining If an Expert's Opinion Has a "Sufficient Factual Basis."

Some appellate decisions have applied a disciplined approach to considering the admission of expert evidence. In Giant Food v. Booker, the Court of Special Appeals acknowledged that under the Rules an expert's testimony must be "the product of reliable principles and methods." 152 Md. App. 166, 188 (2003) (citing Wood v. Toyota, 134 Md. App. at 523). The Booker court discussed two categories under which the "factual basis" inquiry takes place: (1) the specific subject matter related to the case and (2) the factual basis necessary to

show the testimony was the result of reliable principles and methods. Id. at 188-90. The court excluded the expert's testimony because he did not fully know the facts surrounding the plaintiff's alleged exposure—the first prong of the test—but left the lower courts with no clearer picture of the inquiry required in the second prong. Id.

The Court of Special Appeals' opinion in the case below provides little guidance to trial judges or litigants regarding the standard for admissibility of expert testimony. The court drew a distinction between expert evidence to which Frye/Reed applies and that to which it does not. If the proffered testimony is based upon "new or novel techniques," the court ruled that Frye/Reed is employed to determine whether such techniques are "generally accepted" and therefore suitable for introduction to the jury. CSX v. Miller, 159 Md. App. 123, 186-87. If, however, the proffered testimony is not deemed "novel," the court held that admissibility is left solely to the discretion of the trial judge. Id.

The court then went on to celebrate the breadth of that discretion, suggesting that 80 percent of all evidentiary rulings will be affirmed on appeal regardless of whether the evidence is admitted or excluded. Id. at 198-99. The court concluded: "Just because we affirm a judge's discretionary decision to exclude an expert opinion does not necessarily mean that we, on precisely the same facts, would not also affirm the decision of another judge to admit that opinion." Id. The breadth of trial court discretion celebrated by the opinion below means that identity and predilections of the trial judge have more effect on the

administration of justice than does the scientific reliability, or lack thereof, of proffered expert evidence. This both ignores the foundation requirements of the Rules and prior contrary decisions of that court and this Court.

The waters surrounding an "adequate factual basis" have been further muddied by the different ways in which this requirement has been described and interpreted depending upon whether the court is faced with expert evidence in a criminal trial. A look at the trial court's determinations of admissibility in Cobey v. State, 73 Md. App. 233, 533 A.2d 944 (1987), provides a conspicuous example of this difference.

In Cobey expert evidence of paternity, and therefore rape, was excluded by the trial court, though it was based on data the expert witness had published in the scientific literature that had a false-positive rating nearing zero. 73 Md. App. at 243. The evidence was excluded because one earlier study indicated that "there may be some dispute as to the reliability" of the proffered technique. Id. The Court of Special Appeals upheld the conviction and stated that whether the proffered technique is reliable is "not for the courts to decide. Reed requires that the scientific community make that judgment." Id. (citing Reed v. State, 283 Md. 374, 391 A.2d 364 (1978)). Cobey purports to require that the scientific community "generally accept" the method generating the evidence, but then excludes evidence that reasonable genetic researchers and reasonable jurors could accept as tested, valid and reliable, on the basis of one contrary study. Scientific evidence with a tested and proven reliability rate was excluded because that

contrary study's "questioning" of that method prevented a "general acceptance" finding. This request stands in sharp contrast to that affirmed by the Court of Specials Appeals in this case, and in other civil cases.

B. Medical Causation Evidence Is Introduced Without an Adequate Determination Regarding its Relevance and Reliability.

Maryland law concerning admission of expert evidence operates to admit unreliable and unvalidated expert evidence of medical causation. See, e.g., Myers v. Celotex, 88 Md. App. 442, 594 A.2d 1248 (1991), *cert. denied*, Fibreboard Corp. v. Myers, 325 Md. 249, 600 A.2d 418 (1992). In Myers, the trial court had excluded an opinion of an expert that lacked any apparent factual basis. It did so, however, not because of the absence of factual foundation, but only because the expert admitted that his *opinion* was not generally accepted. 88 Md. App. at 456-460. Without addressing the absence of factual foundation, the Court of Special Appeals reversed on the ground that, because the opinion was not based on a novel technique, it did not matter that the opinion itself lacked "general acceptance." Id. at 458.

Myers involved several smokers alleging that they contracted lung cancer as a result of asbestos exposure. Id. at 446, 455. The subject of the expert testimony was whether to attribute causation of these lung cancers to asbestos as well as smoking tobacco, as opposed to attributing them solely to smoking. The trial court excluded the expert's opinion that asbestos causes cancer by imparting an electrical charge to a specific gene on a specific chromosome, which the expert

acknowledged was not generally accepted in the relevant scientific community. Id. at 456. The Myers court discussed no evidentiary or factual basis for this causation opinion, but reversed exclusion of the evidence because it did not matter that the opinion enjoyed no general acceptance. Id. at 458.

The Myers court held that the Reed "general acceptance" standard applies only to the technique or method generating the underlying evidence in support of the opinion testimony. Id. Having satisfied that predicate of general acceptance of the "technique" or "method" that was used to generate the data upon which he relied, all the expert had to state thereafter was that his causation opinion was rendered to a reasonable degree of medical certainty. Id. The question of whether there was any scientific evidence to support that opinion apparently merited no judicial consideration. Id. at 456. Put another way, a qualified expert may provide a causation opinion for Maryland juries, no matter how outlandish or bizarre to fellow experts, so long as the underlying data is obtained by "generally accepted" means.

Myers exemplifies the particular problem with Maryland decisions on expert testimony concerning medical issues, which appears in the instant appeal.[4] Medical opinions are generally admitted upon the expert's incantation of "a reasonable degree of medical certainty." Medical opinions have been

[4] Although Myers pre-dates the adoption of the Maryland Rules of Evidence in 1993, Myers has subsequently been cited as authority for the admissibility of medical opinions without regard to their general acceptance or relevance and reliability. See Owens Corning v. Bauman, 125 Md. App. 454, 499-500, 726 A.2d 745, 767 (1999).

distinguished from novel scientific techniques subject to Reed "general acceptance" consideration, and from further scrutiny of the applicable Maryland Rules of Evidence. See Owens Corning v. Bauman, 125 Md. App. 454, 498, 726 A.2d 745 (1999). Medical experts are allowed to present opinion to a jury that would not pass scrutiny by their scientific peers. In Maryland, if a medical expert speculates that something is more likely true than not true, that opinion will go to the jury without regard to the requirements of the Maryland Rules of Evidence.

In Greater Metro. Orthopaedics, P.A. v. Ward, 147 Md. App. 686 (2002), the Court of Special Appeals considered the reliability of expert medical causation opinion testimony regarding the relationship between the plaintiff/decedent's injuries and a stroke. The court stated "Under Maryland law, the test of the sufficiency of the evidence to take the question of causal relationship to the jury is reasonable probability, or reasonable certainty." Id. at 694 (citations omitted)(citing Wilhelm v. State Traffic Comm'n, 230 Md. 91, 103 n.1 (1962)). Greater Metro Orthopaedics is a post-Rules case, however, the court applied a pre-Rule definition of sufficiency—that which requires a reasonable degree of medical certainty. Rules 5-702 and 5-703, let alone the relevance and reliability requirements contained therein, were not mentioned by the Greater Metro Orthopaedics court.

In another case decided after the adoption of Rules 5-702 and 5-703, Casey v. Grossman, 123 Md. App. 751, 720 A.2d 959 (1998), the Court of Special Appeals considered whether the testimony of a medical expert established that

plaintiff's lead exposure was a "substantial factor cause" of his injury. The court stated that such a determination was fact specific to each case and "trial courts must consider the evidence presented to a *reasonable degree of medical certainty* as to causation." Id. at 762(citing Kraft v. Freedman, 15 Md. App. 187, 193-97, 289 A.2d 614, *cert. denied*, 266 Md. 736 (1977)(emphasis added)).

The plaintiff's medical expert "testified to a reasonable degree of medical certainty that [plaintiff] was continuously exposed to lead...and that each exposure has a cumulative effect." Id. at 763. The Court of Special Appeals discussed the expert's testimony, and ultimately found that there were disputes regarding material facts relied upon by the expert. Id. at 765. The Casey court appears to have taken issue with the reliability, or factual basis, of the expert's testimony, but it did so without citing Rules 5-702 and 5-703. The only guidance it leaves the trial courts is the ambiguous requirement that experts testify to a "reasonable degree of medical certainty." See id. at 763-65.

The result in the Myers line of civil cases is inconsistent with that in Cobey—the criminal case discussed above. In Myers the Court of Special Appeals held that the Reed "general acceptance" standard applies only to the technique or method generating the underlying evidence in support of the testimony. 88 Md. App. at 458. Because the medical expert there based his opinion on broad, general principles, the court only required that the expert state his opinion to reasonable degree of medical certainty, without delineation of methodology. Id.; see also CSX v. Miller, 159 Md. App. at 188 ("Since the

appropriate standard is reasonable medical probability, [an expert's] professional opinion would be admissible even if the majority of his professional colleagues disagree with it."). The result is that medical causation opinions in civil cases have been virtually excepted from the relevance and reliability scrutiny required by the rules, even where the opinions offer new and novel theories of causation; meanwhile scientific evidence of guilt in criminal cases is subjected to the most intense scrutiny under those same rules, even where it is based on methods that have been repeatedly validated. Viewed another way, the evidence in Myers was admitted without any claim of either validation or general acceptance, while in Cobey evidence was excluded because one contrary study overcame affirmative consistent prior validation.

III. THE FRYE/REED TEST IS OBSOLETE, ADDS NOTHING TO THE ANALYSIS REQUIRED BY MARYLAND RULES 5-702 AND 5-703, CONFUSES THE APPLICATION OF THESE RULES, AND SHOULD THEREFORE BE JETTISONED AT LEAST IN CIVIL CASES.[5]

Frye was the prevailing standard for determining the admissibility of expert testimony in our nation's courts prior to Daubert. Frye, and its adoption in Maryland through Reed, also pre-dates the enactment of Maryland Rules 5-702 and 5-703. Frye/Reed is obsolete. It draws a distinction between "novel" and "non-novel" expert evidence that is not only increasingly difficult to apply in the

[5] Both Frye and Reed were criminal cases. MDC and NAM do not address whether this Court should continue the Frye/Reed rule in criminal cases. As demonstrated here, however, the Frye/Reed rule is not well-suited to civil case application.

rapidly unfolding world of scientific discovery, but is also unnecessary in light of the relevance and reliability provisions built into the Maryland Rules of Evidence.

When this Court decided Reed v. State, 283 Md. 374 (1978), the prevailing legal standard for the admissibility of expert testimony was that articulated in Frye v. United States, 293 F. 1013, 1014 (D.C. Cir. 1923). Even then, however, this Court recognized that considerations of uniformity and consistency of decision-making required a test by which the reliability of an expert's process might be established. Reed, at 367-68. In the absence of any other useful guidance, this Court's adoption of Frye was consistent with these considerations. Now, however, the landscape has changed, as this Court and most other courts have acknowledged by codifying rules governing the admission of expert evidence.

This Court, like those in most other states, has adopted Rules of Evidence intended to guide trial court determinations of expert admissibility. Like those other state courts, Maryland courts need guidance on how to apply these rules in a fair and consistent manner. The courts in many other states have turned to Daubert and its progeny for guidance on a methodology.

It appears that, to date, 27 states have accepted the essential principles of Daubert[6], though the precise determination of whether a state follows Daubert is

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[6] See State v. Coon, 974 P.2d 386 (Alas. 1999); Farm Bureau Mut. Ins. Co. of Ark. V. Foote, 14 S.W. 3d 512 (Ark. 2000); State v. Porter, 694 A.3d 1262 (Conn. 1997); Nelson v. State, 628 A.2d 69 (Del. 1993); Jordan v. Ga. Power Co., 466 S.E.2d 601 (Ga. Ct. App. 1995); State v. Parkinson, 909 F.2d 647 (Idaho 1996); Steward v. State, 652 N.E. 2d 490 (Ind. 1995); Hutchinson v. Am. Family Mut. Ins. Co., 514 N.W.2d 882 (Iowa 1994); Mitchell v. Commonwealth, 908 S.W.2d

complicated by the varying extent to which each embraces the federal practice. An additional four states apply some combination of both Daubert and Frye.[7]

In Gilbert v. DaimlerChrysler Corp., the Supreme Court of Michigan most recently considered the interplay of Frye and Daubert, holding that Daubert considerations prevail in determinations regarding expert admissibility under Michigan law. 685 N.W.2d 391, 408-09 (2004). Prior to that decision, in January 2004, Michigan Rule of Evidence 702 was amended to include the three reliability factors articulated in the Federal Rule of Evidence 702. Id. at 780 n. 44. The Gilbert court's holding addressed the pre-amendment version of the Michigan Rule and the Michigan court's previous adherence to the Frye "general acceptance" test. 685 N.W.2d at 408.

Prior to Gilbert, proponents of expert opinion evidence in Michigan bore the burden of establishing admissibility under the Frye/Davis "general acceptance"

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100 (Ky. 1995); State v. Foret, 628 So. 2d 1116 (La. 1993); Green v. Cessna Aircraft Co., 673 A.2d 216 (Me. 1996); Commonwealth v. Lanigan, 641 N.E.2d 1342 (Mass. 1994); Gilbert v. DaimlerChrysler Corp., 685 N.W.2d 391 (Mich. 2004); MISS. R. EVID. 702 (amended 2003, adopting Daubert); State v. Weeks, 891 P.2d 477 (Mont. 1995); Schafersman v. Agland Coop, 631 N.W.2d 862 (Neb. 2001); State v. Cavaliere, 663 A.2d 96 (N.H. 1995); State v. Goode, 461 S.E.2d 631 (N.C. 1995); State v. Nemeth, 694 N.E.2d 1332 (Ohio 1998); Taylor v. State, 889 P.2d 319 (Okla. Crim. App. 1995); State v. O'Key, 800 P.2d 663 (Or. 1995); Raimbeault v. Takeuchi (U.S.) Mfg. Ltd., 772 A.2d 1056 (R.I. 2001); State v. Schweitzer, 533 N.W.2d 156 (S.D. 1995); E.I. du Pont de Nemours & Co., Inc. v. Robinson, 923 S.W.2d 549 (Tex. 1995); State v. Streich, 658 A.2d 38 (Vt. 1995); Wilt v. Buracker, 443 S.E.2d 196 (W.Va. 1993); Springfield v. State, 860 P.2d 435 (Wyo. 1993).

[7] See Courtaulds Fibers, Inc. v. Long, 779 So. 2d 198 (Ala. 2000); Dow Chem. Co. v. Mahlum, 970 P.2d 98 (Nev. 1998); State v. Smith, 1994 WL 361851 (Tenn. Crim. App. July 11, 1994); Cotton v. Commonwealth, 451 S.E.2d 673 (Va. Ct. App. 1994).

standard. Id.; People v. Davis, 72 N.W.2d 269 (Mich. 1995). The Gilbert court stated that the gatekeeping role of the trial judge, requiring that each aspect of an expert's proffered testimony is relevant and reliable, is mandated by Michigan Rule of Evidence 702—and not by Frye/Davis. 685 N.W.2d at 408. The court stated "the court's gatekeeper role is the same under *Davis/Frye* and *Daubert.* Regardless of which test the court applies, the court may admit evidence only once it ensures, pursuant to MRE 702, that expert testimony meets that rule's standard of reliability. In other words, both tests require courts to exclude junk science; *Daubert* simply allows courts to consider more than just 'general acceptance' in determining whether expert testimony must be excluded." Id. at 409.

The language of the Michigan Supreme Court in Gilbert effectively refutes the unfettered discretion championed by the Court of Special Appeals' opinion below. Frye/Reed's requirement of "general acceptance" only where the evidence is "novel" in no way eliminates the Rules' requirements of relevance and reliability for expert evidence.[8]

[8] In People v. Shreck, 22 P.3d 68, 70 (Colo. 2001), the Supreme Court of Colorado held that the relevance and reliability requirements of Colorado Rule of Evidence 702—not Frye—governed a court's determination of admissibility for expert testimony. Gilbert and Schreck each provide well-reasoned examples of state high courts using state evidence rules based on FRE 702 and 703, and the positive experience of the federal courts employing the Daubert interpretation of those rules, to focus the admission of expert evidence on reliability.

IV. THE UNITED STATES SUPREME COURT HAS INTERPRETED THE RULES OF EVIDENCE ON WHICH RULES 5-702 AND 5-703 ARE MODELED TO REQUIRE A JUDICIAL INQUIRY INTO RELEVANCE AND RELIABILITY AND HAS PROVIDED A METHODOLOGY FOR DETERMINING THE ADMISSIBILITY OF EXPERT TESTIMONY.

Daubert and its progeny provide a framework for determining the admissibility of expert testimony that is consistent with the requirements of Maryland Rules 5-702 and 5-703. This Court should look to the carefully considered guidance of the federal courts in formulating the parameters of the relevance and reliability inquiry required by the Rules.

Maryland Rules 5-702 and 5-703 were modeled after Federal Rules of Evidence 702 and 703. Although the language of these rules is not precisely identical, they are sufficiently similar that this Court should look to the guidance of federal case law interpreting these rules. Daubert v. Merrell Dow Pharmaceuticals, Inc.,[9] General Electric Co. v. Joiner,[10] Kumho Tire v. Carmichael,[11] as well as a plethora of cases in the federal circuit courts, have examined the relevance and reliability requirements of the Rules and offer a valuable resource for Maryland courts seeking to interpret these requirements.

A. The Maryland Rules Were Modeled After the Federal Rules of Evidence and Federal Case Law Interpreting These Rules Provides Guidance in Interpreting Maryland Rules 5-702 and 5-703.

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[9] 509 U.S. 579, 591-93; 113 S. Ct. 2786 (1993).
[10] 522 U.S 136; 118 S. Ct. 512 (1997).
[11] 526 U.S. 137; 119 S. Ct. 1167 (1999).

On July 1, 1994, this Court adopted Maryland Rules of Evidence patterned after the federal rules. Maryland's counterpart to Federal Rule of Evidence 702 is Maryland Rule 5-702. See Hutton v. State, 339 Md. 480, 494 n. 10 (1995). The Court's reliance on the federal rules in their choice of language is obvious, and should not be ignored by our trial courts. Indeed, while the Maryland rules differ from the federal rules in some linguistic and stylistic ways, no less an authority than Professor McLain has observed that these differences are easily reconcilable and the essence of the rules remains the same. See LYNN MCLAIN, MARYLAND RULES OF EVIDENCE § 1.1, at 2 (1994).[12]

Specifically, as discussed above, the relevance and reliability requirements of Federal Rules of Evidence 702 and 703 are present in Maryland Rules 5-702 and 5-703. See *supra* § I.

Federal Rule of Evidence 702 states:

> 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,

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[12] See also Kevin M. Carroll, *The Maryland Rules of Evidence: Notes on the New Maryland Rules of Evidence: Codifying the Rule on Expert Testimony: Why Traditional Analysis Should be Generally Acceptable*, 59 Md. L. Rev. 1085 (1995) ("The differences in the level of detail and language [between federal Rules 702 and 703 and the Maryland Rules 5-702 and 5-703] appear to have been made purely as maters of style and clarity to provide Maryland courts with maximum guidance on the admissibility of expert testimony.") (citing MCLAIN, MARYLAND RULES OF EVIDENCE § 2.702.3).

(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.

Federal Rule of Evidence 703 states:

> The facts or data in the particular case upon which an expert bases an opinion or inference may be those perceived by or made known to the expert at or before the hearing. If of a type reasonably relied upon by experts in the particular field in forming opinions or inferences upon the subject, the facts or data need not be admissible in evidence in order for the opinion or inference to be admitted. Facts or data that are otherwise inadmissible shall not be disclosed to the jury by the proponent of the opinion or inference unless the court determines that their probative value in assisting the jury to evaluate the expert's opinion substantially outweighs their prejudicial effect.

The first prong of Maryland Rule 5-702 is identical to the language of Federal Rule of Evidence 702, requiring that a witness be qualified as an expert "by knowledge, skill, experience, training or education." See Md. Rule, Evidence § 5-702. The second and third prongs of Rule 5-702, regarding the appropriateness of expert testimony and its factual basis (see *supra* § I), are analogous to Fed. R. Evid. 702 and are supported by federal law. See Persinger v. Norfolk & Western Railway Co., 920 F.2d 1185 (4th Cir. 1990)(excluding expert testimony regarding the amount of weight that is safe to lift as within the common knowledge of jurors); Sparks v. Gilley Trucking Co., 992 F.2d. 50 (4th Cir. 1993)(acknowledging that expert testimony not supported by a sufficient factual basis may be excluded).

Our courts need guidance in applying the relevance and reliability standards set forth in Rules 5-702 and 5-703, to achieve the ends of justice intended by the

Maryland Rules of Evidence, by basing the admission of expert evidence only upon findings of factual relevance and scientific reliability. Because the relevance and reliability requirements of Maryland Rules 5-702 and 5-703 are also contained within Federal Rules 702 and 703, our courts should employ the guidance offered by federal courts in interpreting these rules.

Determinations of relevance are, in most instances, straight-forward. The proffered testimony will either help the jury to determine a fact in issue, or it will not. Relevance standing alone, however, should be no more favored in the admission of unreliable expert evidence than it is in the admission of unreliable hearsay evidence. Cf. Maryland Rule 5-802 (stating, "Except as otherwise provided by these rules or permitted by applicable constitutional provisions or statutes, hearsay is not admissible.").

Determinations of reliability, however, often will be more complex than determining whether or not reliable evidence would be relevant. The court must delve further into the basis of an expert's opinion in order to discern its reliability. This inquiry should be broad and the totality of the circumstances should be considered. The federal courts, applying these same standards of relevance and reliability, offer a non-exclusive list of factors that a trial court might consider in making determinations of reliability.

B. Guided by the Extensive Federal and State Court Experience with Daubert, This Court Can Provide a Methodology That Will Advance the Goals of the Maryland Rules.

The United States Supreme Court held in Daubert v. Merrell Dow Pharmaceuticals, Inc., 509 U.S. 579, 125 L. Ed. 2d 469 (1993), that the Federal Rules of Evidence require the trial court to determine "whether the expert is proposing to testify to (1) scientific knowledge that (2) will assist the trier of fact to understand or determine a fact in issue. This entails 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." Id. at 592 (notes omitted).

In U.S. v. Horn, 185 F.Supp. 2d 530 (D. Md. 2003), the United States District Court for the District of Maryland discussed the results achieved when a consistent and thorough application of the relevance and reliability requirements of the rules is employed, guided by Daubert, as compared to the outcome of Frye/Reed analysis. "Under Daubert the parties and the trial court are forced to reckon with the factors that really do determine whether evidence is reliable, relevant and 'fits' the case at issue. Focusing on the tests used to develop evidence, the error rate involved, what learned publications in the field have said when evaluating it critically, and then finally, whether it has come [to] be generally accepted, is a difficult task. But, if undertaken as intended, it does expose evidentiary weaknesses that otherwise would be overlooked if, following the dictates of Frye, all that is needed to admit evidence is the testimony of one or more experts in the field that the evidence at issue derives from methods or procedures that have become generally accepted." Id. at 553 (citing Wright &

Gold, 29 Federal Practice and Procedures § 6266) ("Daubert's focus on multiple criteria for scientific validity compels lower courts to abandon long existing per se rules of admissibility or inadmissibility grounded upon the Frye standard.").

The courts applying Daubert have fashioned a coherent methodology for applying the relevance and reliability standards of the evidentiary rules governing expert evidence in federal courts as well as in the courts of a majority of the states. Litigants in Maryland courts deserve no less.

V. THE MARYLAND LEGISLATURE IS MOVING TO ADDRESS THIS ISSUE.

In a special session held by the Maryland General Assembly in December 2004, the Maryland Patients' Access to Quality Healthcare Act of 2004 was introduced. See House Bill 2A, 2004 MD H.B. 2A.[13] The original version of the bill contained language amending Title 9, Witnesses, of the Courts and Judicial Proceedings Article to include a new § 9-124, which states:

> (A) In a civil action, if a court determines that 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 determined by the court to be qualified as an expert by knowledge, skill, experience, training, or education may testify concerning the evidence or fact in issue in the form of an opinion or otherwise only if the following criteria are met:

[13] Introduced December 28, 2004 by The Speaker Busch and Delegates Conroy, Anderson, Barkley, Barve, Benson, Bobo, Bozman, Branch, Cane, G. Clagett, V. Clagett, Conway, D. Davis, Donoghue, Doory, Dumais, Frush, Gaines, Goldwater, Griffith, Guiterrez, Hammen, Healey, Hixson, Holmes, Hubbard, Hurson, Jones, Kaiser, King, Krysiak, Kullen, Lee, Love, Madaleno, Malone, Mandel, Marriott, McHale, McIntosh, Moe, Montgomery, Morhaim, Murray, Nathan-Pulliam, Patterson, Pendergrass, Petzold, Proctor, Rosenberg, Sophocleus, Stern, V. Turner, Vallario and Zirkin.

(1)the testimony is based on 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.

(B) If a court considers it necessary or on motion by a party, the court may, as a preliminary matter and out of the presence of the jury, hear evidence regarding the criteria in subsection (A) of this section, including hearing testimony from the propose witness.

This language was deleted before the final vote, in which House Bill 2A passed by a vote of 75-47 in the House and 35-14 in the Senate. See Maryland Legislative Information Service website at http://mlis.state.md.us/2004s1/billfile/HB0002.htm (last visited February 15, 2005). Governor Robert L. Ehrlich vetoed House Bill 2A on January 10, 2005. In Governor Ehrlich's letter to the Speaker of the House, Michael E. Busch, setting forth his reasons for vetoing the bill, the Governor stated "The conference committee removed the provision that would have adopted the *Daubert* decision...which was in the bill passed by the House. Although it is difficult to quantify the effect of these changes that were originally proposed in the bill, they clearly would have improved the system and likely would have reduced costs." See Letter from Gov. Ehrlich to Speaker Busch of January 10, 2005, at 8 (emphasis in original). The Maryland General Assembly overrode Governor Ehrlich's veto on January 11, 2005, and House Bill 2A became law.

The Maryland House of Delegates has expressed dissatisfaction with the reluctance of Maryland courts to accept Daubert. The Governor seconds this view. The conference with the Senate ended the House's quest to legislate on this

subject during the Special Session of 2004, but the passage of the bill in the House indicates a public concern with the treatment this subject is getting in our courts.

VI. EVEN IF THIS COURT DECLINES TO FOLLOW THE DAUBERT METHODOLOGY, IT STILL SHOULD PROVIDE ITS OWN METHODOLOGY FOR THE CONSISTENT APPLICATION OF THE RELEVANCE AND RELIABILITY STANDARDS OF THE MARYLAND EXPERT EVIDENCE RULES.

This Court should instruct the lower courts that the relevance and reliability provisions of the Maryland Rules must be applied in a disciplined and consistent method to all proffered expert testimony. Other states have followed this path. See Brown v. Crown Equipment Corp., 2004 Tenn. App. LEXIS 114, *8-9 (Feb. 24, 2004)(although not expressly adopting Daubert, Tennessee employs Daubert's non-exclusive list of factors to determine reliability); People v. Shreck, 22 P.3d 68 (Colo. 2001)(holding that the determination of reliability of expert testimony requires a broad inquiry into a range of factors including those outlined in Daubert).

In People v. Shreck the Supreme Court of Colorado rejected the Frye general acceptance test and endorsed a standard for the admissibility of expert testimony based upon its own Rule of Evidence 702 and the non-exclusive list of factors set forth in Daubert. 22 P.3d at 82-83. The Frye test had been the prevailing standard for determining the admissibility of expert testimony in Colorado prior to the court's opinion in People v. Hamilton, 746 P.2d 947, 951

(Colo. 1987), wherein the court limited Frye's applicability only to novel scientific devices and processes. Shreck, 22 P.3d at 74.

The Shreck court undertook to "clearly set forth the standard for admitting scientific evidence in Colorado"—a standard that was needed due to the tension in the lower courts between Frye, Colorado Rule of Evidence 702 and Daubert.[14] Ultimately the court concluded that a court's reliability inquiry should be flexible and "broad in nature." The Shreck court declined to set forth a rigid set of factors and instead offered a recitation of the wide range of issues other courts have considered when making reliability determinations. The court stated:

> For example, in Daubert, the Court articulated the following nonexclusive list of general observations that a trial court might consider: (1) whether the technique can and has been tested; (2) whether the theory or technique has been subjected to peer review and publication; (3) the scientific technique's known or potential rate of error, and the existence and maintenance of standards controlling the technique's operation; and (4) whether the technique has been generally accepted. The Third Circuit has articulated yet other considerations: (1) the relationship of the proffered technique to more established modes of scientific analysis; (2) the existence of specialized literature dealing with the technique; (3) the non-judicial uses to which the technique are put; (4) the frequency and type of error generated by the technique; and (5) whether such evidence has been offered in previous cases to support or dispute the merits of a particular scientific procedure.

Shreck, 22 P.3d at 77 (citing Daubert, 509 U.S. at 593-94; U.S. v. Downing, 753 F.2d 1224, 1238-39 (3d Cir. 1985)(internal citations omitted)).

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[14] "In the absence of such a clear standard, the trial court [in Shreck] applied both a Frye and a Daubert analysis in determining the admissibility of the DNA evidence at issue." Shreck, 22 P.3d at 75.

This Court should make clear that, contrary to the assertions in the Court of Special Appeals opinion below, determinations regarding the evidence's reliability are not wholly within the trial judge's discretion. Reed makes this very point: "The answer to the question about the reliability of a scientific technique or process does not vary according to the circumstances of each case. It is therefore inappropriate to view this threshold question of reliability as a matter within each trial judge's individual discretion." 283 Md. at 380. The flexible approach taken by the Colorado Supreme Court in Shreck is in keeping with Maryland's liberal approach to the admissibility of evidence. See CSX v. Miller, 159 Md. App. at 183 (discussing "Maryland's traditional inclination toward liberal admissibility."). With a non-exclusive list of reliability-determinative factors in hand, and the clear instruction to rigorously consider the reliability of proffered evidence, our trial courts would have the tools for a reasoned and consistent application of their discretion in determining the admissibility of expert testimony.

Indeed, the Court of Special Appeals already has some decisions that provide a framework for reviewing a trial court's discretionary rulings of admissibility under Rules 5-702 and 5-703. In Wood v. Toyota, 134 Md. App. 512 (2000), Chief Judge Murphy declared:

> Our case law is consistent with the amendments to Rule 702 of the Federal Rules of Evidence (Testimony by Experts), which take effect on December 1, 2000, when FRE 702 will provide:
>
> If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or 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.*

Id. at 524 n.13 (emphasis in original).

Wood affirmed the exclusion of expert evidence regarding airbag defects, because the expert was not minimally qualified on that highly technical subject, lacked adequate knowledge of the facts of the accident, and had not applied any reliable methodology in formulating his opinion. Id. at 519.

Similarly in Giant Food v. Booker, the Court of Special Appeals reversed a judgment, holding that the expert's opinion that plaintiff's exposure to Freon caused his asthma should have been excluded, even though the expert was qualified, because the expert did not have accurate and complete knowledge of plaintiff's various exposures to chemicals or when his symptoms began, and could not find any medical or scientific study showing that Freon inhalation caused asthma. Booker, 152 Md. App. at 188-90.

Wood and Booker taken together form the nucleus of a methodology applying the relevance and reliability standards of Rules 5-702 and 5-703. These opinions are consistent with the methodology of Daubert, as Chief Judge Murphy pointed out in Wood.[15] This Court should make clear that Wood and Booker are

[15] Discussing a federal district court case, the Wood court observed "Although the court applied the Daubert test for admissibility of expert testimony, its analysis is helpful to the case *sub judice*." Wood, 134 Md. App. at 526 (discussing Demaree v. Toyota, 37 F. Supp. 2d 959 (D.Ky. 1999)).

the approach that trial courts must take, and the trial court's discretion will be reviewed on appeal within that framework of analysis.

CONCLUSION

For the forgoing reasons, *Amici Curiae* MDC and NAM respectfully pray that the Court either adopt the guidance of Daubert and its progeny, or the Court of Special Appeals' approach in Booker and Wood, and provide the Maryland courts a methodology for the consistent application of the relevance and reliability standards of Rules 5-702 and 5-703.

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on this 22nd day of February, 2005 two copies of the foregoing were mailed, postage prepaid, to:

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