IS *FRYE* DYING OR IS *DAUBERT* DOOMED? DETERMINING THE STANDARD OF ADMISSIBILITY OF SCIENTIFIC EVIDENCE IN ALABAMA COURTS

I. INTRODUCTION

The admissibility of scientific evidence into a court of law may seem straightforward. Evidentiary analysis contemplating the admission of scientific evidence has, however, been plagued by confusion and complexity. The number of journal articles and commentaries written about the admissibility of scientific evidence indicates the inherent controversy that surrounds the topic.[1]

Two standards, commonly referred to as the *Frye*[2] and *Daubert*[3] standards, currently dominate the question of admissibility of scientific evidence. Both standards potentially guide a trial judge in making the determination of whether to admit scientific evidence. The burning issue with respect to the admission of scientific evidence in Alabama is whether the Alabama Supreme Court will choose to adopt the federal standard for admission of scientific evidence or whether the court will continue to follow the traditional *Frye* standard for admission of scientific evidence. As of the writing of this Note, the court has not definitively answered this question. With the ever-increasing use of scientific evidence in both criminal and civil cases, the question of which evidentiary standard Alabama courts should follow in determining the admissibility of scientific evidence is critical.

Section II of this Note explains the historical development of the *Frye* standard and the rationale underlying the standard.

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1. *See, e.g.*, Paul C. Gianelli, *The Admissibility of Novel Scientific Evidence:* Frye v. United States, *a Half-Century Later*, 80 COLUM. L. REV. 1198, 1205 (1980); Mark McCormick, *Scientific Evidence: Defining a New Approach to Admissibility*, 67 IOWA L. REV. 879, 896 (1982); Heather G. Hamilton, *The Movement from* Frye *to* Daubert*: Where Do the States Stand?*, 38 JURIMETRICS J. 201, 209-10 (1998).
2. 293 F. 1013 (D.C. Cir. 1923).
3. 509 U.S. 579 (1993).

Also discussed in Section II is the criticism surrounding the *Frye* standard and the confusion among circuits in trying to answer the question of whether *Frye* survived the enactment of the Federal Rules of Evidence. Section III focuses on the United States Supreme Court's decision in *Daubert v. Merrell Dow Pharmaceuticals, Inc.* and on criticism of the *Daubert* standard.

Section IV discusses the viability of the *Frye* standard in Alabama and the Alabama Supreme Court's decision in *Ex Parte State of Alabama*. Section V considers the policy reasons and rationale supporting the adoption of *Daubert* and briefly looks at the United States Supreme Court's decision in *Kumho Tire*. Finally, section VI concludes by considering the question of whether Alabama should follow the federal standard.

II. THE IMPLICATIONS OF A LIE-DETECTOR TEST ON SCIENTIFIC EVIDENCE: THE EMERGENCE, ADOPTION AND EXPANSION OF THE *FRYE* DECISION

Without taking much liberty, it is fair to say that when the District of Columbia circuit court handed down its decision in *Frye v. United States*, the far-reaching implications of its decision were unpredictable. As explained in an oft-quoted treatise on evidence, "many courts purport to apply special rules of admissibility when expert witnesses are called to testify about scientific tests or findings," and "[t]his notion of a special rule for scientific evidence originated in 1923 in Frye v. United States."[4]

In *Frye*, a criminal defendant charged with murder sought to introduce results from a systolic blood pressure test.[5] Often described as a precursor to the modern lie detector test, the systolic blood pressure test is based on the premise that when the subject is telling the truth, his or her blood pressure diminishes. The "utterance of a falsehood" results in a rise in blood pressure.[6] The trial court sustained the government's objection to the admission of the test results, and the defendant was ulti-

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4. JOHN W. STRONG ET AL., MCCORMICK ON EVIDENCE § 203, at 362 (4th ed. 1992).

5. *Frye*, 293 F. at 1013.

6. *Id.*

mately convicted.[7] On appeal, the Court of Appeals for the District of Columbia considered whether the trial court committed reversible error in excluding testimony as to the results of the systolic blood pressure test.[8]

The court ultimately held that the defendant's systolic blood pressure detection test lacked the required "standing and scientific recognition among physiological and psychological authorities as would justify the courts in admitting expert testimony deduced from the discovery, development, and experiments thus far made."[9] The rationale captured in the following passage has endured beyond the unsuspecting two-page opinion handed down in 1923:

> Just when a scientific principle or discovery crosses the line between the experimental and demonstrable stages is difficult to define. Somewhere in this twilight zone the evidential force of the principle must be recognized, and 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.[10]

Thus, the standard for determining the admissibility of novel, scientific evidence first appeared in a decision that employed the language of "general acceptance" without any explanation or authority to support its position.[11]

In the years following the *Frye* decision, courts adopted the standard with "scant discussion," embracing the concept of "general acceptance" as the appropriate standard by which to determine the admissibility of novel scientific evidence.[12] Both federal and state courts adopted the general acceptance standard by applying it to a variety of tests, including "polygraphy, graphology, hypnotic and drug induced testimony, voice stress analysis, voice spectograms, ion microprobe mass spectroscopy, infrared sensing of aircraft, retesting of breath samples for alcohol con-

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7. *Id.* at 1013-14.
8. *Id.*
9. *Id.*
10. *Frye*, 293 F. at 1014.
11. Gianelli, *supra* note 1, at 1205.
12. EDWARD W. CLEARY ET AL., MCCORMICK ON EVIDENCE § 203, at 606 (3d ed. 1984).

tent, psychological profiles of battered women and child abusers, post traumatic stress disorder as indicating rape, astronomical calculations, and blood group typing."[13] In addition, Alabama courts have recognized *Frye v. United States* as the "seminal case establishing the safeguard against admission into evidence of facts gleaned from an unreliable scientific test."[14] Despite the widespread acceptance of the *Frye* standard in jurisdictions across the country, in the last two decades the standard has come under considerable attack.[15]

A. Criticism of the Frye *Standard*

Under the *Frye* standard, even if expert testimony is both relevant and helpful in assisting the trier of fact, there is an additional qualification that the novel scientific principle or technique be generally accepted by the relevant scientific community.[16] Some of the criticism surrounding the *Frye* standard stems from the difficulties in identifying the appropriate field that constitutes the relevant scientific community.[17] Criticism of the *Frye* standard, however, goes beyond the mere difficulties in the application of a general acceptance test. In fact, some commentators have criticized the general acceptance standard as "not enlightening" and "remarkably vague."[18] Furthermore, the general acceptance standard has been attacked for both its exclusion of reliable evidence and its admission of unreliable evidence.[19] Those who criticize the *Frye* standard as excluding reliable evidence tend to emphasize the inherent constraints of a standard that depends upon general acceptance in a relevant

13. STRONG ET AL., *supra* note 4, § 203, at 363.

14. *Ex parte* Dolvin, 391 So. 2d 677, 679 (1980).

15. STRONG ET AL., *supra* note 4, § 203, at 363.

16. CLEARY ET AL., *supra* note 12, at 605; *see also* CHARLES W. GAMBLE, MCELROY'S ALABAMA EVIDENCE § 127.02(4), at 590 (5th ed. 1996).

17. Gianelli, *supra* note 1, at 1208 (explaining that some scientific techniques "do not fall within the domain of a single academic discipline or professional field"; rather, they may overlap into other disciplines).

18. Gianelli, *supra* note 1, at 1223 (quoting CLEARY ET AL., *supra* note 12, at 490; 22 CHARLES A. WRIGHT & KENNETH W. GRAHAM, JR., FEDERAL PRACTICE & PROCEDURE § 5168, at 87 (1978)).

19. Gianelli, *supra* note 1, at 1223.

scientific community.[20] For example, one commentator suggests that a "literal reading of *Frye v. United States* would require that the courts always await the passing of a 'cultural lag' during which period the new method will have had sufficient time to diffuse through scientific discipline and create a requisite body of scientific opinion needed for acceptability."[21]

Prior to the Supreme Court's decision in *Daubert v. Merrell Dow Pharmaceuticals, Inc.*,[22] which ultimately overruled *Frye*, several state courts had rejected *Frye*.[23] For instance, in *United States v. Williams*,[24] the Second Circuit declined to apply the general acceptance standard in determining the admissibility of spectrographic voice identification evidence.[25] In *Williams*, the court explained that the "'Frye' test is usually construed as necessitating a survey and categorization of the subjective views of a number of scientists, assuring thereby a reserve of experts available to testify."[26] The court acknowledged the "[d]ifficulty in applying the 'Frye' test" and recognized that this difficulty "led a number of courts to its implicit modification."[27] Furthermore, in a footnote, the court quoted Professor McCormick's criticism that general acceptance "'is a proper condition for taking judicial notice of scientific facts, but not a criterion for the admissibility of scientific evidence.'"[28] Thus, *Williams* ultimately admitted the scientific evidence by relying on a traditional relevancy analysis instead of "general acceptance."[29]

Rejection of the *Frye* standard before *Daubert* was not isolated to federal courts; in fact, several state courts similarly

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20. *See id.*

21. *Id.* (quoting Constantine J. Malestkos & Stephen J. Spielman, *Introduction of New Scientific Methods in Court*, *in* LAW ENFORCEMENT SCI. & TECH. 957, 958 (S.A. Yesfsky ed., 1967)).

22. 509 U.S. 579 (1993).

23. Whalen v. State, 434 A.2d 1346 (Del. 1980); State v. Hall, 297 N.W.2d 80 (Iowa 1980); State v. Catanese, 368 So. 2d 975 (La. 1979); State v. Williams, 388 A.2d 500 (Me. 1978); People v. Daniels, 422 N.Y.S.2d 832 (1979); State v. Kersting, 623 P.2d 1095 (Or. Ct. App. 1981); Phillips *ex rel* Utah State Dep't of Soc. Servs. v. Jackson, 615 P.2d 1228 (Utah 1980); Watson v. State, 219 N.W.2d 398 (Wis. 1974).

24. 583 F.2d 1194 (2d Cir. 1978).

25. *Williams*, 583 F.2d at 1198.

26. *Id.*

27. *Id.*

28. *Id.* n.7 (quoting CLEARY ET AL., *supra* note 12, at 491).

29. McCormick, *supra* note 1, at 896.

rejected the *Frye* standard.[30] The Wisconsin Supreme Court was the first to reject the *Frye* standard in a case where the admissibility of hair identification testimony was at issue.[31] After recognizing Professor McCormick's criticism of the general acceptance standard, the *Watson* court concluded that the "identification of the chin hair was a matter of expert testimony that could be challenged by cross-examination or by impeaching evidence, either from other experts or from treatises" and that the "question is one of credibility to be resolved by the jury."[32]

Similarly, in *State v. Catanese,*[33] the Louisiana Supreme Court relied on Professor McCormick's criticism of *Frye* in concluding that the "'general acceptance' standard of Frye is an unjustifiable obstacle to the admission of polygraph test results."[34] Even though the *Catanese* court was influenced by criticism of the *Frye* standard, it nevertheless excluded the polygraph evidence, reasoning that the "probative value is so outweighed by reasons for its exclusion that the evidence should not be admitted in criminal trials."[35] Thus, the reaction of several state courts to the growing criticism of *Frye* was evident years before the United States Supreme Court overruled the *Frye* standard in its *Daubert* decision.[36]

B. *Defense of the* Frye *Standard*

Although criticism of the *Frye* standard is both notable and widespread, some defend the standard as ensuring "that those most qualified to assess the general validity of a scientific meth-

30. *Id.* at 897-902.
31. *See* Watson v. State, 219 N.W.2d 398 (Wis. 1974).
32. *Watson*, 219 N.W.2d at 403.
33. 368 So. 2d. 975 (La. 1979).
34. *Catanese*, 368 So. 2d at 980.
35. *Id.* at 981.
36. *See Watson*, 219 N.W.2d at 398; *Catanese*, 368 So. 2d at 980; *see also* State v. Kersting, 623 P.2d 1095, 1101 (Or. Ct. App. 1981) (rejecting the *Frye* standard with respect to expert testimony regarding hair analysis and comparison); Phillips *ex rel.* Utah State Dep't of Soc. Servs. v. Jackson, 615 P.2d 1228, 1234 (Utah 1980) (addressing criticism of *Frye* as being "overly rigorous" and holding that an analysis of admissibility of scientific evidence "while taking into account general acceptance . . . must focus in all events on proof of inherent reliability").

od will have the determinative voice."[37] Other courts have acknowledged the *Frye* criticism while simultaneously maintaining that there "are compelling reasons which justify the Frye principle."[38] Moreover, a leading treatise explains that:

> Proponents of the test argue that it assures uniformity in evidentiary rulings, that it shields juries from any tendency to treat novel scientific evidence as infallible, that it avoids complex, expensive, and time-consuming courtroom dramas, and that it insulates the adversary system from novel evidence until a pool of experts is available to evaluate it in court.[39]

According to the same treatise, "most commentators agree, however, that these objectives can be attained satisfactorily with less drastic constraints on the admissibility of evidence."[40]

III. OVERRULING *FRYE*: THE UNITED STATES SUPREME COURT'S DECISION IN *DAUBERT V. MERRELL DOW PHARMACEUTICALS*

In 1993, the United States Supreme Court overruled the *Frye* standard and the "general acceptance" test in favor of an approach dictated by the Federal Rules of Evidence, specifically Rule 702.[41] While the Court acknowledged the popularity of the *Frye* general acceptance standard, it also recognized the increasing criticism of the rule.[42] The Court also realized that *Daubert* provided an opportunity to resolve the apparent conflict between the *Frye* standard and the Federal Rules of Evidence.[43]

In *Daubert*, the Petitioners, Jason Daubert and Eric Shuller, were minor children born with serious birth defects that allegedly resulted from their mothers' ingestion of the drug Bendectin

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37. United States v. Addison, 498 F.2d 741, 744 (D.C. Cir. 1974).

38. Reed v. State, 391 A.2d 364, 369 (Md. 1978); *see* People v. Kelly, 549 P.2d 1240, 1244 (Cal. 1976) (arguing in response to the criticism of *Frye* as too conservative that there is "ample justification for the exercise of considerable judicial caution in the acceptance of evidence developed by new scientific techniques").

39. STRONG ET AL., *supra* note 4, at 363.

40. *Id.*

41. *See Daubert*, 509 U.S. at 585-88.

42. *Id.* at 585.

43. *See id.* at 587.

during pregnancy.[44] In support of its motion for summary judgment, Merrell Dow Pharmaceuticals, Inc. ("Merrell Dow") offered an affidavit of Doctor Steven H. Lamm.[45] Dr. Lamm stated that he had "reviewed all the literature on Bendectin and human birth defects—more than 30 published studies involving over 130,000 patients" and concluded that the use of Bendectin in the first trimester of pregnancy had not been proven to be a factor in human birth defects.[46] In response, the Petitioners offered eight experts who concluded that Bendectin could cause birth defects.[47] The experts offered by the Petitioners, however, based their conclusions on animal studies, pharmacological studies and a re-analysis of published epidemiological studies.[48]

The district court granted Merrell Dow's summary judgment motion, holding that scientific evidence is admissible only if the principle upon which it is based is "'sufficiently established to have general acceptance in the field to which it belongs.'"[49] Affirming the lower court's holding, the Ninth Circuit held that in order to be admissible, an expert opinion on a scientific technique must be generally accepted as reliable in the applicable scientific community.[50] Thus, as the Supreme Court explained, it granted certiorari "in light of sharp divisions among the courts regarding the proper standard for the admission of expert testimony."[51]

In ultimately overruling *Frye*, the Court noted the debate and controversy surrounding *Frye*.[52] The Court also discussed the emergence of the term "Frye-ologist" in describing the well-established debates about *Frye*.[53] The Court's opinion, however, was not limited to a discussion of the conflict surrounding *Frye*. Rather, the Court focused on the viability of *Frye* since the adop-

44. *Id.* at 582.
45. *Id.*
46. *Daubert*, 509 U.S. at 582.
47. *Id.* at 583.
48. *Id.*
49. Daubert v. Merrell Dow Pharm., Inc., 727 F. Supp. 570, 572 (S.D. Cal. 1989) (quoting United States v. Kilgus, 571 F.2d 508, 510 (9th Cir. 1928)).
50. *Daubert*, 727 F. Supp. at 572.
51. *Id.* at 585.
52. *Daubert*, 509 U.S. at 585.
53. *Id.* at 586 n.4

tion of the Federal Rules of Evidence.[54] In determining its viability, the Court cited both *United States v. Abel*[55] and *Bourjaily v. United States*[56] to explain the intersection of the common law and the Federal Rules of Evidence.[57] Consequently, the Court turned to Rule 702, which governs expert testimony, to decide whether the draftsmen intended to incorporate the *Frye* test into Rule 702 or whether *Frye* was superseded by the Federal Rules of Evidence.[58] Ultimately, the Court held that *Frye* was superseded by the Federal Rules of Evidence. It explained that "[n]othing in the text of this Rule [702] establishes 'general acceptance' as an absolute prerequisite to admissibility" and that "[t]he drafting history makes no mention of *Frye*, and a rigid 'general acceptance' requirement would be at odds with the 'liberal thrust' of the Federal Rules and their 'general approach' of relaxing the traditional barriers to 'opinion testimony.'"[59]

Although the Court decided that the "austere" *Frye* standard was inconsistent with the liberalizing tendencies of the Federal Rules, the admissibility of scientific evidence was not to go unchecked.[60] Rather, the Court looked to the Rules themselves and their inherent limitation that "any and all scientific testimony or evidence admitted is not only relevant, but reliable."[61] Rule 702 reads, in part, "[i]f scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue," an expert "may testify thereto."[62] According to the Court, "the requirement that an expert's testimony pertain to 'scientific knowledge' establishes a standard of evidentiary reliability."[63] Furthermore, 702's requirement that evidence or testimony "assist the trier of fact"

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54. *See id.* at 587-89.

55. 469 U.S. 45 (1984) (holding that the common law precept at issue was consistent with Rule 402's requirement of admissibility).

56. 483 U.S. 171 (1987) (holding that the common law doctrine at issue was inconsistent with the Rules and therefore superseded by the adoption of the Rules).

57. *Daubert*, 509 U.S. at 587-88.

58. *See id.*

59. *Id.* at 588 (quoting Beech Aircraft Corp. v. Rainey, 48 U.S. 153, 169 (1988)).

60. *Id.* at 587-89.

61. *Id.*

62. FED. R. EVID. 702.

63. *Daubert*, 509 U.S. at 587-89 (quoting FED. R. EVID. 702).

incorporates the prerequisite of relevancy.[64] In effect, the Court justified overruling *Frye* because it is inconsistent with the Federal Rules, and the Rules themselves provide a backstop that prevents the admission of unreliable or irrelevant scientific testimony.[65]

Perhaps *Daubert* is most famous (or infamous) for its implications for trial judges. According to both the accolades and criticisms of the decision, *Daubert* casts the trial judge in a "gatekeeper" role.[66] According to the Court, "[f]aced with a proffer of expert scientific testimony, then, the trial judge must determine at the outset, pursuant to Rule 104(a), 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."[67] The Court explained that it is the trial judge's responsibility to 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."[68] Significantly, in light of the criticism that *Daubert* creates too great a task for trial judges, the Court (almost prophetically) commented that "[w]e are confident that federal judges possess the capacity to undertake this review."[69]

The Court, however, did not leave trial judges without any guidance. Indeed, it provided a non-exhaustive checklist of factors that could be considered in making a determination of whether scientific evidence is reliable.[70] Those factors include, but are not limited to, the following: whether the theory or technique "can be (and has been) tested," "whether the theory or technique has been subjected to peer review and publication," and whether there has been "a consideration of the potential rate of error."[71] In addition, a "general acceptance" of the theory

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64. FED. R. EVID. 702.

65. *Daubert*, 509 U.S. at 589.

66. *See generally* Bogosian v. Mercedes-Benz N. Am., Inc., 104 F.3d 472, 476 (1st Cir. 1997); United States v. Paul, 175 F.3d 906, 910 (11th Cir. 1999).

67. *Daubert*, 509 U.S. at 592.

68. *Id.* at 592-93.

69. *Id.* at 593.

70. *Id.*

71. *Id.* at 593-94.

or technique may be considered, but it is not required.[72] Throughout the Court's discussion of the role of the trial judge and the factors that he or she may consider in rendering the decision as to admissibility, there was an emphasis on flexibility and on the methodology underlying the theories at issue.[73] Indeed, the Court resoundingly held that "[t]he focus, of course, must be solely on principles and methodology, not on the conclusions that they generate."[74]

IV. EXPERT SCIENTIFIC TESTIMONY IN ALABAMA

No jurisdiction has escaped the ever-increasing use of scientific evidence in the courtroom, and Alabama courts are certainly no exception. The influx of scientific testimony into Alabama courtrooms to date, compounded by the fast-moving state of technology, guarantees that future courts will continue to face questions concerning the intersection of science and the law. It is against this background that the issue of scientific expert testimony emerges, challenging and testing evidentiary analysis—particularly the liberal thrust of the Federal Rules of Evidence.

A. The Application of the Frye *Standard in Alabama*

According to Professor Gamble, "Alabama courts have accepted the federal decision of *Frye v. United States* as the seminal case establishing the guidelines for recognition of facts gleaned from a scientific test."[75] Alabama case law supports this proposition, insisting that *Frye* is the appropriate standard to determine whether novel scientific evidence is admissible.[76] Furthermore, Alabama courts have justified their use of the *Frye*

72. *Daubert*, 509 U.S. at 594.

73. *Id.* at 594-95.

74. *Id.* at 595.

75. GAMBLE, *supra* note 16, at 1848; *see Ex parte* Dolvin, 391 So. 2d 677, 679 (Ala. 1980).

76. *Ex parte* Perry, 586 So. 2d 242, 247 (Ala. 1991); Adams v. State, 484 So. 2d 1160, 1162 (Ala. Crim. App. 1985).

standard as "safeguarding 'against admission into evidence of facts gleaned from an unreliable scientific test.'"[77]

Like Federal Rule 702, Alabama Rule of Evidence 702 is silent on the question of whether *Frye* survived the adoption of the Alabama Rules of Evidence.[78] As suggested by Professor Gamble in *McElroy's Alabama Evidence*, however, there are several grounds which support the conclusion that the *Frye* standard survived the adoption of the rules.[79] First, Professor Gamble notes that the Advisory Committee's Note to Alabama Rule of Evidence 402[80] makes "it clear that there was no intent to abrogate this or other preexisting case law rules under which to measure relevancy."[81] Since the Rules did not expressly reject *Frye*, the logical argument is that it continues to be the standard in Alabama.[82] Second, *Frye*'s viability is arguably recognized by implication in the Advisory Committee's Note to Rule 901(b)(9).[83] Finally, several Alabama courts have recognized *Frye*'s viability despite the adoption of the rules and the *Daubert* decision.[84] Thus, it is reasonably clear that in spite of the adoption of the Alabama Rules of Evidence and the United States Supreme Court's decision in *Daubert*, *Frye* has survived in Alabama.

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77. Prewitt v. State, 460 So. 2d 296, 301 (Ala. Crim. App. 1984) (quoting *Ex parte Dolvin*, 391 So. 2d at 679).

78. GAMBLE, *supra* note 16, at 591.

79. *Id.*

80. The Advisory Committee Note to Alabama Rule of Evidence 402 states: "The Alabama Supreme Court is free, of course, to reexamine the wisdom of exclusionary case law lying outside the Alabama Rules of Evidence themselves. Nothing in Rule 402 is intended to restrict this fredom."

81. GAMBLE, *supra* note 16, at 591.

82. *Id.* (citing Gianelli, *supra* note 1, at 1223).

83. The Advisory Committee Note to Alabama Rule of Evidence 901(b)(9) states that "[n]othing in subsection (b)(9) is intended to preclude the trial judge from considering, as a preliminary matter under Alabama Rule of Evidence 104(a), the general state of knowledge in the field as to whether a process or system does indeed produce an accurate result."

84. *Ex parte* State of Alabama, No. 1952024, 1998 WL 12625, at *8 n.7 (Ala. Jan. 16, 1998) (stating that "[w]ith respect to expert scientific testimony on subjects other than DNA techniques governed by § 36-18-30, Frye remains the standard of admissibility in Alabama").

B. The Arguable Erosion of Frye *Through Modification and Rejection*

At least one noted commentator has argued that the modification and rejection of the *Frye* standard by courts nationwide has led to an overall erosion of the *Frye* standard.[85] Certainly, an argument can be made that Alabama courts have contributed to this "erosion" by their attempts to modify or reject *Frye* where the dictates of justice so demand.[86] Regardless of whether various modifications and rejections actually erode the *Frye* standard, Alabama courts are deprived of a uniform standard from which to determine the admissibility of all scientific evidence.

The widely contested issue of DNA evidence provides an example of how Alabama courts have modified the traditional *Frye* standard. In *Ex parte Perry*,[87] the Alabama Supreme Court addressed the admissibility of DNA evidence to identify the defendant as the perpetrator of a particular crime.[88] The *Perry* court acknowledged that "[p]erhaps the most important flaw in the Frye test is that by focusing attention on the general acceptance issue, the test obscures critical problems in the use of a particular technique."[89] The court also cited the Supreme Court of South Carolina in holding that "we do not adhere exclusively to the formula, enunciated in *Frye v. United States*, . . . [b]elieving that the inquiry underlying the *Frye* formula is one of the reliability of the scientific method rather than its popularity within a scientific community."[90]

Consequently, the Alabama Supreme Court fashioned a "*Frye*-plus" standard,[91] by which a court determining the admissibility of DNA evidence would consider a three-prong analysis.[92] Generally, under this test, a court would consider the (1)

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85. *See* McCormick, *supra* note 1, at 886-902.

86. *See, e.g., Ex parte Perry*, 586 So. 2d at 248; *see Ex parte Dolvin*, 391 So. 2d at 679.

87. 586 So. 2d 242, *superseded by Ex parte State of Alabama*, 1998 WL 12625, at *1 (holding that Alabama Code sections 36-18-20 to 36-18-30 supersede the *Perry* standard).

88. *Ex parte Perry*, 586 So. 2d at 242.

89. Gianelli, *supra* note 1, at 1226; *Ex parte Perry*, 586 So. 2d at 248.

90. *Ex parte Perry*, 586 So. 2d at 249 (citations omitted).

91. *Ex parte State of Alabama*, 1998 WL 12625, at *4-5.

92. *Ex parte Perry*, 586 So. 2d at 250.

theory, (2) techniques, and (3) performance and interpretation of accepted techniques.[93] Thus, the court modified the *Frye* test in order to create a standard for determining the admissibility of DNA test results.[94]

Similarly, the Alabama Court of Criminal Appeals apparently modified *Frye* in considering the issue of sexual abuse syndrome.[95] In *Sexton v. State*,[96] the Court of Criminal Appeals identified four general factors to be used when considering the admissibility of expert testimony regarding sexual abuse syndrome.[97] The first of these factors is necessity—the extent to which a fair trial makes use of expert opinion.[98] The second factor is reliability—the extent to which the subject of expert opinion has achieved general acceptance in the relevant scientific community.[99] The third factor is understandability—the extent to which the expert opinion will actually assist the trier of fact.[100] The final factor is importance—the extent to which the expert opinion is dispositive of the issue in the case.[101]

The court explained that the reliability category "accommodates the concerns underpinning the *Frye* test."[102] Significantly, the *Sexton* court explained that even though the evidence "may not have possessed a high degree of *reliability* (in the sense that '[t]he behavioral scientific literature conclusively demonstrates that there is no general acceptance of the ability of experts in the field to diagnose a child as having been sexually

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93. *Id.*

94. Dubose v. State, 662 So. 2d 1189, 1195 (Ala. 1995) (explaining that because the *Perry* court recognized the possibility for error in DNA tests, the court advocated a modified *Frye* test to determine whether DNA test results may be received into evidence).

95. *See* Sciscoe v. State, 606 So. 2d 202, 204 (Ala. Crim. App. 1992) (recognizing the four general factors a court may review in considering testimony of sexual abuse); *see also* Sexton v. State, 529 So. 2d 1041, 1049 (Ala. Crim. App. 1988) (setting out four factors—necessity, reliability, understandability and importance—determining the admissibility of evidence of sexual abuse).

96. 529 So. 2d 1041 (Ala. Crim. App. 1988).

97. *Sexton*, 529 So. 2d at 1049.

98. *Id.*

99. *Id.*

100. *Id.*

101. *Id.*

102. *Sexton*, 529 So. 2d at 1049 (citation omitted).

abused')," the evidence did possess a "high degree of *understandability*," and "its *necessity* was extremely great."[103]

Not only have Alabama courts implicitly modified the *Frye* test by adding factors to supplement the notion of general acceptance, but in other areas of evidentiary analysis, Alabama courts have rejected the *Frye* test altogether.[104] In *Ex parte Dolvin*,[105] the Alabama Supreme Court addressed the issue of whether the trial court erred in allowing a forensic odontologist to testify to his opinion regarding the identification of a skeleton.[106] The court ultimately held that *Frye* was inapplicable to the forensic odontology test since that test was based on a "physical comparison rather than a scientific test or experiment."[107]

Relying on the same rationale articulated in *Ex parte Dolvin*, in *Handley v. State*,[108] the Alabama Court of Criminal Appeals also rejected the *Frye* standard.[109] In *Handley*, the court explained that there was "no scientific test or experiment. . . . Rather, there was a physical comparison" with respect to the bite mark analysis at issue.[110] The court therefore held that "[b]ased upon our own precedent and the persuasiveness of other jurisdictions' rulings, we, too, hold that the admissibility of the dental witness's bite mark comparison does not depend on meeting the *Frye* standard."[111]

Alabama courts have arguably eroded *Frye* in a variety of other contexts. For example, blood splatters or blood stain interpretations have been deemed admissible because they either satisfy the *Frye* test or because the *Frye* test does not apply to such evidence.[112] Similarly, the Alabama Court of Criminal Ap-

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103. *Id.* (quoting David McCord, *Expert Psychological Testimony About Child Complaints in Sexual Abuse Prosecutions: A Foray Into the Admissibility of Novel Psychological Evidence*, 77 J. CRIM. L. & CRIMINOLOGY 1, 38 (1986)).

104. *See, e.g.*, Handley v. State, 515 So. 2d 121, 131 (Ala. Crim. App. 1987) (rejecting *Frye* as inapplicable to dental expert's bite mark comparison). *See also Ex parte Dolvin*, 391 So. 2d at 679 (holding that *Frye* was inapplicable to a forensic odontology test because it was based on a physical comparison rather than a scientific test).

105. 391 So. 2d 677 (Ala. 1980).

106. *Ex parte Dolvin*, 391 So. 2d at 678.

107. *Id.* at 679.

108. 515 So. 2d 121 (Ala. Crim. App. 1987).

109. *Handley*, 515 So. 2d at 131.

110. *Id.* at 130.

111. *Id.* at 131.

112. *See* GAMBLE, *supra* note 16, at 1855 (citing Robinson v. State, 574 So. 2d

peals has held that the "one-leg stand test" and the "walk and turn test" administered in determining intoxication levels do not have to satisfy the *Frye* test since they are not novel scientific tests.[113] Additionally, tests used to measure blood-alcohol or controlled substance content in urine, blood, breath and bodily substance samples have been held to satisfy the *Frye* test.[114] Thus, with respect to the above mentioned tests, *Frye* was held either inapplicable or satisfied, rendering the standard virtually unnecessary in future cases employing those tests.

C. The Implications of the Alabama Supreme Court's Decision in Ex parte State of Alabama

Professor Gamble states that "[a]lthough there is ample authority to continue the *Frye* standard in force, adoption of the Alabama Rules of Evidence will afford the courts an opportunity to review the issue of whether it should remain as the exclusive test for insuring reliability."[115] In *Ex parte State of Alabama,*[116] the Alabama Supreme Court seized this opportunity to review the viability of the *Frye* standard in the context of DNA analysis.[117] Although the focus of the court's opinion is narrow in that it addresses the admissibility of DNA tests only, the decision is nonetheless significant because of its implications.

In 1994, the Alabama Legislature addressed the issue of DNA admissibility when it developed a DNA data bank.[118] In an effort to provide law enforcement with the "latest scientific technology," the Legislature declared, in pertinent part, "[t]hat genetic identification established through DNA testing and analysis should be admissible as a matter of evidence in all courts of this state and that juries, both civil and criminal, should be responsible for assessing the weight, if any, to be given to expert

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910, 918 (Ala. Crim. App. 1990)).

113. Seewar v. Town of Summerdale, 601 So. 2d 198, 200 (Ala. Crim. App. 1992).

114. GAMBLE, *supra* note 16, at 1850.

115. *Id.* at 591

116. 1998 WL 12625, at *1.

117. *Ex parte State of Alabama*, 1998 WL 12625, at *1 (holding that Alabama Code sections 36-18-20 to -30 supersede the *Perry* standard).

118. *Id.* at *4.

testimony or evidence."[119] In addition, section 36-18-30 of the Alabama Code states that:

> Expert testimony or evidence relating to the use of genetic markers contained in or derived from DNA for identification purposes shall be admissible and accepted as evidence in all cases arising in all courts of this state, provided, however, the trial court shall be satisfied that the expert testimony or evidence meets the criteria for admissibility as set forth by the United States Supreme Court in Daubert, et. ux., et. al., v. Merrell Dow Pharmaceuticals, Inc. decided on June 28, 1993.[120]

Thus, in *Ex parte State of Alabama*, the Alabama Supreme Court addressed the issue of whether sections 36-18-20 through 36-18-30[121] superseded the *Frye* standard in determining the admissibility of DNA evidence.[122] Before *Ex parte State of Alabama*, however, the Alabama Supreme Court had already modified the *Frye* test by creating a standard that took into consideration the margin of error in the performance of the DNA test at issue.[123] Therefore, the *Ex parte State of Alabama* court considered the viability of the *Frye*-plus standard in light of the development of the state DNA data bank.[124]

The trial court's decision in *Ex parte State of Alabama*, that the Legislature's enactment of section 36-18-30 did not affect the three-pronged *Frye*-plus test, gave the Alabama Supreme Court an opportunity to decide the proper standard for Alabama courts to apply in the admission of DNA evidence.[125] Ultimately, the Alabama Supreme Court reversed and remanded, holding that the Legislature's enactment of section 36-18-30 superseded the *Frye*-plus standard announced in *Perry*.[126] The court's rationale in *Ex parte State of Alabama* is of particular interest since the court mentions *Daubert* in justifying its holding.[127]

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119. ALA. CODE § 36-18-20(f) (1975).
120. *Id.*
121. *Id.*
122. *Ex parte State of Alabama*, 1998 WL 12625, at *1.
123. *Ex parte Perry*, 586 So. 2d at 242.
124. *Ex parte State of Alabama*, 1998 WL 12625, at *4.
125. *Id.*
126. *Id.*
127. *Id.* at *5.

The court concluded that the Legislature, in deciding whether to apply the *Frye*-plus or *Daubert* standard to DNA evidence, explicitly chose the *Daubert* standard.[128] The court acknowledged the express language of section 36-18-30, which specifically refers to the *Daubert* decision and stated that "[w]e view this choice as purposeful and effective."[129] The court then explained that since *Daubert* rejected *Frye*, it logically follows that *Daubert* also rejects the *Frye*-plus standard which was much more strict than the basic *Frye* standard.[130] Finally, the court recognized that *Ex parte Perry* was based upon an Eighth Circuit decision which was no longer good law since that circuit had subsequently adopted *Daubert*.[131] The court therefore held that "[t]rial courts should use the flexible *Daubert* analysis" in determining the admissibility of DNA evidence.[132]

It seems unlikely, however, that *Ex parte State of Alabama* will result in a widespread adoption of *Daubert* in Alabama.[133] In a brief yet succinct footnote, the court explicitly held that "[w]ith respect to expert scientific testimony on subjects other than DNA techniques governed by § 36-18-30, *Frye* remains the standard of admissibility in Alabama."[134]

Even absent the court's comment on the viability of *Frye*, there are several independent grounds supporting its viability.[135] As Professor Gamble points out, Rule 702's silence with respect to the *Frye* standard is not dispositive of its viability.[136] In fact, as mentioned above, Professor Gamble suggests at least three grounds that support the conclusion that the *Frye* doctrine survived the adoption of the Alabama Rules of Evidence.[137]

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128. *Id.*

129. *Ex parte State of Alabama*, 1998 WL 12625, at *5 (citing Belcher v. McKinney, 333 So. 2d 136, 140 (Ala. 1976)).

130. *Id.* at *5.

131. *Id.* at *6 (citing Pioneer Hi-Bred Int'l v. Holden Found. Seeds, Inc., 35 F.3d 1226, 1229 n.12 (8th Cir. 1994)). The *Ex parte State of Alabama* court points out that the Eighth Circuit has expressly held that in light of *Daubert*, the *Two Bulls* decision upon which *Perry* was based "no longer has any precedential value." *Id.*

132. *Id.*

133. *See Ex parte State of Alabama*, 1998 WL 12625, at *8 n.7.

134. *Id.*

135. GAMBLE, *supra* note 16, at 591.

136. *Id.*

137. *Id.* First, Professor Gamble suggests that the advisory notes to Rule 402 indicate that there was "no intent to abrogate this or other preexisting case law

Thus, outside of the realm of DNA evidence, the conclusion that *Frye* is still alive and well in Alabama is undeniably supported in the Alabama Supreme Court's most recent opinion on the issue as well as on several other grounds.

V. ADOPTING *DAUBERT*: WHERE THE STATES STAND, THE POLICY AND PROGENY OF *DAUBERT*

In evaluating the implications of adopting *Daubert,* it is significant to note the states that have implemented that standard and the rationale underlying their decisions.[138] States adopting *Daubert* emphasize the familiar criticisms of the *Frye* standard as unduly conservative and burdensome.[139] For example, in adopting *Daubert,* the Connecticut Supreme Court explained that "an admissibility test for scientific evidence premised *solely* on its 'general acceptance' is conceptually flawed and therefore must be rejected."[140] Other courts adopting *Daubert* have focused on the standard as consistent with the Federal Rules of Evidence. In ultimately rejecting *Frye*, the Louisiana Supreme Court reasoned that since the Louisiana Code of Evidence was patterned after the Federal Rules of Evidence, it should use the *Daubert* decision as "instructive in interpreting the Louisiana Code."[141] Similarly, the Supreme Court of Vermont noted that the principles of *Daubert* should apply in Vermont state courts since the Vermont Rules of Evidence "are essentially identical to the federal ones on admissibility of scientific evidence."[142] In addition, the Massachusetts Supreme

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rules under which to measure relevancy." Therefore, it may be argued that the failure to expressly reject the *Frye* standard evidences its viability. Second, Gamble argues that other advisory notes impliedly recognize the survival of the *Frye* standard. Finally, Professor Gamble reminds us that the *Daubert* decision handed down by the United States Supreme Court did not fall within a constitutional dimension; therefore, Alabama courts are not bound to follow it. *Id.*

138. Hamilton, *supra* note 1, at 201, 209-10 (including a table of every state's current standard of admissibility for scientific evidence as of Dec. 15, 1997).

139. State v. Porter, 698 A.2d 739, 749-51 (Conn. 1997).

140. *Porter*, 698 A.2d at 750.

141. State v. Foret, 628 So. 2d 1116, 1122-23 (La. 1993).

142. State v. Brooks, 643 A.2d 226, 229 (Vt. 1993).

Court adopted *Daubert* because its reasoning was consistent with that court's prior test of demonstrated reliability.[143]

Courts have employed a variety of rationales for rejecting *Frye* which include, but are not limited to, the need for a more flexible standard and the attractiveness of adopting a standard consistent with the Federal Rules of Evidence.[144] Perhaps most convincing, however, are the rationales offered by the Supreme Court in the *Daubert* decision and its progeny. One of the *Daubert* Court's strongest arguments in favor of replacing *Frye* was the need for a more flexible standard. The Court characterized the rule set out in *Frye* as an "austere standard," inconsistent and incompatible with the liberal thrust of the Federal Rules of Evidence.[145] It emphasized that simply because the *Frye* test was "displaced by the Rules of Evidence does not mean, however, that the Rules themselves place no limits on the admissibility of purportedly scientific evidence."[146] On the contrary, the Court reasoned that the language of Rule 702 requires that evidence admitted be "not only relevant, but reliable."[147] It explained that the language of Rule 702 provides inherent safeguards which ensure that an expert's opinion will have a "reliable basis in the knowledge and experience of his discipline."[148] Therefore, the inherent safeguards provided by Rule 702 satisfy the overarching concern of evidentiary relevance and reliability.[149]

Under the Federal Rules of Evidence, expert witnesses, unlike ordinary witnesses, are permitted "wide latitude to offer opinions, including those that are not based on firsthand knowledge or observation."[150] Thus, the Court also argues that the

143. Commonwealth v. Lanigan, 641 N.E.2d 1342, 1349 (Mass. 1994).

144. *Lanigan*, 641 N.E.2d at 1348.

145. *Daubert*, 509 U.S. at 589.

146. *Id.* at 589.

147. *Id.*

148. *Id.* at 592.

149. *See id.* at 595; *see also Daubert*, 509 U.S. at 596 (noting that the conventional devices of "[v]igorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof" are the appropriate safeguards to guard against the admission of "shaky but admissible evidence . . . rather than wholesale exclusion under an uncompromising 'general acceptance' test").

150. *Daubert*, 509 U.S. at 592 (relying on Rules 701, 702, and 703 of the Federal Rules of Evidence as justification for this statement).

more flexible *Daubert* standard recognizes the distinction that the rules make between expert and lay witnesses. Further, the *Daubert* standard protects the "common law insistence upon 'the most reliable sources of information,'" also embodied in Rule 702.[151] Additionally, the gate-keeping function that *Daubert* imposes is consistent with the underlying goals of relevancy and reliability.[152] As the Court most recently explained in *Kumho Tire Co. v. Carmichael*, the purpose of the gate-keeping function is "to make certain that an expert, whether basing testimony upon professional studies or personal experience, employs in the courtroom the same level of intellectual rigor that characterizes the practice of an expert in the relevant field."[153]

The most recent progeny of *Daubert* reinforces the Supreme Court's position that *Daubert* is the appropriate standard to ensure the reliability of expert testimony and achieve consistency with the Federal Rules of Evidence. In *Kumho Tire*, the Court addressed the split among the circuits[154] over whether *Daubert* applies to expert testimony that might be characterized as "technical" rather than "scientific."[155] In *Carmichael v. Samyang Tire, Inc.*,[156] the Eleventh Circuit held that an Alabama district court judge erred as a matter of law in applying *Daubert* to the

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151. *Id.* (quoting FED. R. EVID. 702).

152. Kumho Tire Co., Ltd. v. Carmichael, 119 S. Ct. 1167, 1176 (1999).

153. *Kumho Tire Co.*, 119 S. Ct. at 1176.

154. *See* Compton v. Suburu of Am., 82 F.3d. 1513, 1519 (10th Cir. 1997) (holding *Daubert* inapplicable to the testimony of an aerospace and mechanical engineering expert); McKendall v. Crown Control Corp., 122 F.3d 803, 806 (9th Cir. 1997) (finding that it was error to apply *Daubert* to mechanical engineer's testimony); Freeman v. Case Corp., 118 F.3d 1011, 1016 n.6 (4th Cir. 1997) (holding that *Daubert* did not apply to a mechanical engineer's testimony about an alleged pedal defect in a lawn mower); Stagl v. Delta Air Lines, Inc., 117 F.3d 76, 82 (2d. Cir. 1997) (finding error in barring mechanical engineer's testimony because of application of *Daubert*); *cf.* Smelser v. Norfolk S. Ry. Co., 105 F.3d 299, 303-04 (6th Cir. 1997) (finding *Daubert* applicable to the testimony of a biochemical engineer who testified to an alleged defective shoulder belt in a pickup truck); Watkins v. Telsmith, Inc., 121 F.3d 984, 990 (5th Cir. 1997) (applying *Daubert* to a civil engineering expert); Peitzmeier v. Hennessy Indus., Inc., 97 F.3d 293 (8th Cir. 1996) (upholding district court's exclusion of the testimony of an engineer who testified to a tire changer's alleged defective design); Cummins v. Lyle Indus., 93 F.3d 362, 370 (7th Cir. 1996) (holding that *Daubert* factors were properly applied to engineering expert); Surace v. Caterpillar, Inc., 111 F.3d 1039, 1055-56 (3d Cir. 1997) (upholding exclusion of electromechanical engineer's testimony pursuant to *Daubert*).

155. *Kumho Tire Co.*, 119 S. Ct. at 1174.

156. 131 F.3d 1433, 1435 (11th Cir. 1997).

testimony of a tire expert, reasoning that "'Daubert does not create a special analysis for answering questions about the admissibility of all expert testimony. Instead it provides a method for evaluating the reliability of witnesses who claim *scientific* expertise.'"[157] Ultimately, the Court reversed the Eleventh Circuit, holding that the basic "gatekeeping" function of the trial judge under Rule 702 applies to *all* expert testimony, not just scientific testimony.[158]

This extension of *Daubert* is significant in that the Court reemphasized the policy reasons behind the "gatekeeping" function while sending a clear message that the implications of *Daubert* were not limited to the facts of that case. The *Kumho Tire* Court rejected the argument that *Daubert* was relegated to questions of scientific testimony; rather, the Court insisted that Rule 702 *did not* create a "schematism that segregates expertise by type while mapping certain kinds of questions to certain kinds of experts."[159] The clear import of the Court's holding reflects the inevitable conclusion that a rigid standard such as "general acceptance" is inconsistent with the liberal thrust of the Federal Rules of Evidence and is incompatible with uncertainties of "[l]ife and the legal cases that it generates."[160] By refusing to limit *Daubert* to scientific experts, the Court elevates the goal of reliable and relevant testimony above arguably picayune debates over what is "scientific" rather than "technical." Thus, the Court recognizes that "Rule 702 grants the district judge the discretionary authority, reviewable for abuse, to determine reliability in light of the particular facts and circumstances of the particular case."[161]

VI. CONCLUSION

While the national viability of the *Frye* standard may be questionable, the future of *Daubert* is much more certain. The Supreme Court's recent decision in *Kumho*, expanding *Daubert*

157. *Carmichael*, 131 F.3d at 1435 (quoting United States v. Sinclair, 74 F.3d 753, 757 (7th Cir. 1996) (emphasis added)).

158. *Kumho Tire Co.*, 119 S. Ct. at 1174 (emphasis added).

159. *Id.*

160. *Id.*

161. *Id.* at 1179.

to all expert testimony, suggests that *Daubert* will not be confined to the facts of that case. Rather, the idea of a flexible standard of evidentiary admissibility comprised of various factors will gauge the admission of expert testimony. Further, the Court's insistence that an evidentiary standard of admissibility reflects the liberal thrust of the Federal Rules of Evidence seems to ensure that the resurrection of a more rigid standard, at least in the federal system, is unlikely.

The explicit text of Rule 702 of the Alabama Rules of Evidence demands that expert testimony be relevant and reliable in order to assist the trier of fact. The inherent limitations that relevancy and reliability impose undermine the argument that the rejection of *Frye* will create a "free for all" of pseudo-science in the courtroom. In addition, trial judges balancing prejudice under Rule 403, in conjunction with vigorous cross-examination, provide other reinforcements to ensure the reliability of the evidence. *Daubert's* expansion, on the other hand, offers flexibility and uniformity that comport with the liberal nature of the Federal and Alabama Rules of Evidence. Therefore, the need for a uniform standard to assist the Alabama judiciary in determining the admissibility of scientific evidence may outweigh any ambiguities surrounding the *Daubert* standard.

Alma Kelley McLeod