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## Guarding the Gate to Expert Testimony: Kumho Tire Co. v. Carmichael and State v. Council

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## **GUARDING THE GATE TO EXPERT TESTIMONY: *KUMHO TIRE CO. V. CARMICHAEL* AND *STATE V. COUNCIL***

### I. INTRODUCTION

Testimony by expert witnesses has become a tremendously important part of litigation. With constant changes in technology and scientific research, the information required to determine the outcome of a case may go far beyond the knowledge base found in the lay experience of any jury member. Therefore, experts often have to explain the very basis for many claims.

The increased use of expert witnesses to explain complex topics to juries results in the need for rules regulating which experts will be allowed to testify on what subjects. Trial courts must have a useful scheme for determining when an expert is able to provide a useful, reliable, and relevant opinion to the jury. Recently, both the United States Supreme Court and the South Carolina Supreme Court have issued opinions addressing such a scheme.

In *Kumho Tire Co. v. Carmichael*,<sup>1</sup> the United States Supreme Court decided the most recent in a series of cases interpreting Federal Rule of Evidence 702 and the use of expert testimony. *Kumho* involved expert testimony regarding an accident allegedly caused by a defective tire.<sup>2</sup> The Court held that the previously used factors regarding scientific testimony could also be applied to experience-based testimony.<sup>3</sup>

The South Carolina Supreme Court interpreted South Carolina Rule of Evidence 702 in *State v. Council*,<sup>4</sup> which involved the use of expert testimony regarding mitochondrial DNA.<sup>5</sup> The South Carolina Supreme Court upheld the admissibility of the testimony under its own list of factors, rather than simply following the United States Supreme Court's analysis.<sup>6</sup>

This Note discusses *Kumho* and its most significant predecessors, *Daubert v. Merrell Dow Pharmaceuticals, Inc.*<sup>7</sup> and *General Electric Co. v. Joiner*,<sup>8</sup> and their roles in clarifying the use of expert testimony. Further, this Note explores South Carolina's interpretation of its rules on expert testimony, as well as South Carolina's application of the United States Supreme Court rulings in its

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1. 526 U.S. 137 (1999).

2. *Id.* at 142.

3. *Id.*

4. 335 S.C. 1, 515 S.E.2d 508 (1999).

5. *Id.* at 17, 515 S.E.2d at 516.

6. *Id.* at 21, 515 S.E.2d at 519.

7. 509 U.S. 579 (1993).

8. 522 U.S. 136 (1997).

most recent case, *State v. Council*.<sup>9</sup> Though the approach of both courts is similar, the South Carolina Supreme Court has indicated that it will not explicitly follow United States Supreme Court precedent like *Kumho*, but would instead follow its own scheme.

## II. THE FEDERAL SCHEME

### A. Federal Rule 702 and Its Application

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."<sup>10</sup> The rule has two requirements: (1) The expert's knowledge must be helpful to the jury, and (2) the witness must be qualified.

The first requirement only demands that the information be helpful, not that the subject matter be beyond the existing knowledge of a jury. Louisell and Mueller state that "specialized knowledge or skill may add precision or depth to the ability of the trier of fact to reach conclusions about subjects which lie well within common experience."<sup>11</sup> Commentators have interpreted this rule as presuming the admissibility of expert testimony.<sup>12</sup> The helpfulness standard of Rule 702 "goes primarily to relevance."<sup>13</sup> Expert testimony, like all evidence, is also subject to the relevancy test of Rule 401.<sup>14</sup> Federal Rule of Evidence 702's "'helpfulness' standard requires a valid scientific connection to the pertinent inquiry as a precondition to admissibility."<sup>15</sup>

As to the requirements for the qualification of an expert, the rule only provides that the witness must be qualified "by knowledge, skill, experience, training, or education."<sup>16</sup> Thus, by putting virtually no limit on how one can

9. 335 S.C. 1, 515 S.E.2d 508 (1999).

10. FED. R. EVID. 702.

11. 3 DAVID W. LOISELL & CHRISTOPHER B. MUELLER, FEDERAL EVIDENCE § 382, at 640 (1979).

12. FAUST F. ROSSI, EXPERT WITNESSES 26-27 (1991) ("Judges may differ widely in their assessment of whether a particular kind of expert testimony meets the helpfulness standard of Rule 702, but the presumption favors admissibility."); see also 4 JACK B. WEINSTEIN & MARGARET A. BERGER, WEINSTEIN'S FEDERAL EVIDENCE § 702.04[1] (Joseph M. McLaughlin ed., Matthew Bender 2d ed. 1999) ("Because of the Federal Rules' emphasis on liberalizing the admission of expert testimony, doubts about whether an expert's testimony will be useful should generally be resolved in favor of admissibility unless strong factors such as time or surprise favor exclusions.").

13. *Daubert*, 509 U.S. at 591. For discussion of *Daubert*, see *infra* Part II.B.1.

14. FED. R. EVID. 401 (stating relevant evidence "means evidence having any tendency to make the existence of any fact that is of consequence to the determination of the action more probable or less probable than it would be without the evidence.").

15. *Daubert*, 509 U.S. at 591-92.

16. FED. R. EVID. 702.

qualify as an expert witness, Rule 702 allows a wide range of “qualified” experts in a variety of areas. “Thus within the scope of the rule are not only experts in the strictest sense of the word, e.g. physicians, physicists, and architects, but also the large group sometimes called ‘skilled’ witnesses, such as bankers or landowners testifying to land values.”<sup>17</sup>

## B. *The Setting Before Kumho*

### 1. *Daubert v. Merrell Dow Pharmaceuticals, Inc.*

*Daubert v. Merrell Dow Pharmaceuticals, Inc.*,<sup>18</sup> was the first major ruling by the United States Supreme Court on expert testimony after the adoption of Federal Rule of Evidence 702. Prior to *Daubert*, many courts used the “general acceptance” test of *Frye v. United States*,<sup>19</sup> which stated:

Somehow 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.<sup>20</sup>

*Daubert* departed from *Frye* by describing the duty of the trial judge under the Rules of Evidence as a “gatekeeping role”<sup>21</sup> in which the “judge must ensure that any and all scientific testimony or evidence admitted is not only relevant, but reliable.”<sup>22</sup> As a result, the general acceptance standard of *Frye* became only a factor that might be relevant under the approach adopted in *Daubert*.<sup>23</sup>

In *Daubert*, two children and their parents brought suit against Merrell Dow, the manufacturer of the prescription drug Bendectin, for birth defects allegedly caused by the drug.<sup>24</sup> Merrell Dow presented an affidavit by an expert witness stating that, after reviewing all the literature on Bendectin, he found no evidence that Bendectin caused any risk of birth defects.<sup>25</sup> In response, *Daubert*

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17. FED. R. EVID. 702 advisory committee’s note.

18. 509 U.S. 579 (1993).

19. 293 F. 1013 (D.C. Cir. 1923).

20. *Id.* at 1014.

21. *Daubert*, 509 U.S. at 597.

22. *Id.* at 589.

23. See 4 WEINSTEIN & BERGER, *supra* note 12, § 702.05[1]. After briefly reviewing the history of the *Frye* test, the Court held that *Frye* was superseded by enactment of Rule 702, and that “general acceptance” is no longer a precondition on the admissibility of the evidence. A *Frye*-type analysis still bears on the admissibility of the evidence, but only as one factor in the admissibility equation. *Id.* (footnotes omitted).

24. *Daubert*, 509 U.S. at 582.

25. *Id.*

presented eight experts who concluded that Bendectin had been linked to birth defects in animal studies.<sup>26</sup> The district court, applying the general acceptance test, granted summary judgment to Merrell Dow after concluding that the testimony of Daubert's witnesses was not "sufficiently established to have general acceptance in the field to which it belongs" due to lack of publication and peer review.<sup>27</sup> The United States Court of Appeals for the Ninth Circuit affirmed the district court's decision.<sup>28</sup>

The United States Supreme Court overruled the Ninth Circuit, holding that the *Frye* test was superseded by the adoption of the Federal Rules of Evidence.<sup>29</sup> The Court concluded that the trial judge must determine, pursuant to Rule 401, whether the expert is going to testify regarding "(1) scientific knowledge that (2) will assist the trier of fact to understand or determine a fact in issue."<sup>30</sup> The Court indicated that courts must determine whether the expert uses scientifically valid reasoning and whether that reasoning is applicable to the facts of the case.<sup>31</sup> The Court identified four factors to aid courts in determining whether the testimony will actually help the trier of fact: (1) whether the theory can and has been tested;<sup>32</sup> (2) whether the theory has been subject to peer review and publication;<sup>33</sup> (3) the known or potential rate of error;<sup>34</sup> and (4) the theory's general acceptance.<sup>35</sup> Thus, the general acceptance theory was replaced by a flexible, multi-factor approach which judges must apply to the facts of a particular case.

## 2. General Electric Co. v. Joiner

The Supreme Court clarified the standard of review of the trial judge's gatekeeper role in *General Electric Co. v. Joiner*.<sup>36</sup> The Court held that the standard of review in decisions involving the admissibility of expert testimony is whether the trial court committed an abuse of discretion.<sup>37</sup> The Court stated "that '[c]ases arise where it is very much a matter of discretion with the court whether to receive or exclude the evidence; but the appellate court will not reverse in such a case, unless the ruling is manifestly erroneous.'"<sup>38</sup>

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26. *Id.* at 583-84.

27. *Id.* at 583 (quoting *United States v. Kilgus*, 571 F.2d 508, 510 (9th Cir. 1978)).

28. *Id.* at 584.

29. *Id.* at 587.

30. *Id.* at 592.

31. *Id.* at 593.

32. *Id.*

33. *Id.*

34. *Id.* at 594.

35. *Id.*

36. 522 U.S. 136 (1997).

37. *Id.* at 139.

38. *Id.* at 142 (quoting *Spring Co. v. Edgar*, 99 U.S. 645, 658 (1879)).

In *Joiner*, the plaintiff brought suit against General Electric after he had been diagnosed with small cell lung cancer.<sup>39</sup> Although the plaintiff smoked and had a history of lung cancer in his family, he alleged that the cancer was caused by exposure to polychlorinated biphenyls (PCBs)<sup>40</sup> which were present in the fluid in the transformers with which he worked.<sup>41</sup> The plaintiff's expert witnesses testified that cancer can be caused by PCBs, as well as furans and dioxins to which the plaintiff was also exposed.<sup>42</sup> These experts testified that it was likely that the exposure to PCB, furan, and dioxin caused the plaintiff's cancer.<sup>43</sup>

The district court granted summary judgment to General Electric after deciding to exclude the experts' testimony on the ground that it was not sufficient to "rise above 'subjective belief or unsupported speculation.'"<sup>44</sup> The Eleventh Circuit reversed on the basis of the Federal Rules of Evidence presumption favoring the admission of expert testimony.<sup>45</sup> The court of appeals also suggested that it was the role of the jury, not the judge, to decide the accuracy of the expert witnesses' testimony.<sup>46</sup>

The United States Supreme Court reversed the court of appeals.<sup>47</sup> The Court stated that the Federal Rules of Evidence "leave in place the 'gatekeeper' role of the trial judge in screening such evidence. A court of appeals applying 'abuse-of-discretion' review to such rulings may not categorically distinguish between rulings allowing expert testimony and rulings disallowing it."<sup>48</sup> The Court determined that the district court did not abuse its discretion because the studies the experts planned to use were highly dissimilar to the facts of the case.<sup>49</sup> Therefore, it was within the discretion of the district court to conclude that no relevant connection existed between these studies and the opinions offered.<sup>50</sup>

*Joiner* was a limited case because it did not add new factors to the gatekeeper role of judges regarding the admissibility of expert witnesses, but instead clarified the standard of review, not discussed in *Daubert*, by ruling that abuse of discretion is the applicable standard under the Federal Rules of Evidence.<sup>51</sup>

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39. *Id.* at 139.

40. "PCB's are widely considered to be hazardous to human health." *Id.*

41. *Id.*

42. *Id.* at 140.

43. *Id.*

44. *Id.* (quoting *General Electric Company v. Joiner*, 864 F.Supp. 1310, 1326 (N.D. Ga. 1994)).

45. *Id.*

46. *Joiner*, 522 U.S. at 141.

47. *Id.*

48. *Id.* at 142.

49. *Id.* at 144-45.

50. *Id.* at 145.

51. *Id.* at 146.

### C. Kumho Tire Co. v. Carmichael

Following *Daubert* the lower courts split regarding the possible flexibility of *Daubert* and the application of *Daubert* to all experts. *Kumho Tire Co. v. Carmichael*<sup>52</sup> addressed this split by stressing the open-ended, flexible nature of the approach and making it applicable to all experts.<sup>53</sup>

*Kumho* arose from a suit brought in federal court by Patrick Carmichael against the tire maker and its distributor.<sup>54</sup> Carmichael alleged that while driving his minivan a defect in one of the vehicle's tires<sup>55</sup> caused a tire blow-out that led to a severe accident, killing Carmichael's passenger and injuring several others.<sup>56</sup> In a deposition, Dennis Carlson, Jr. testified as an expert for Carmichael regarding the tire failure.<sup>57</sup>

Carlson's testimony assumed certain undisputed facts about tires in general<sup>58</sup> as well as the specific tire involved in the accident.<sup>59</sup> For the purpose of the appeal, the Supreme Court also accepted that these premises were not in dispute.<sup>60</sup> Ultimately, Carlson concluded that a manufacturing defect caused the tire failure.<sup>61</sup>

52. 526 U.S. 137 (1999).

53. *Id.* at 141; see also 4 WEINSTEIN & BERGER, *supra* note 12, § 702.05[2][b] ("In *Kumho Tire Co. v. Carmichael*, the Supreme Court answered the questions whether and to what extent the *Daubert* approach to scientific evidence should be applied to technical and other expert evidence." (footnote omitted)).

54. The Supreme Court collectively referred to the tire maker and distributor as "Kumho Tire." *Id.*

55. *Id.*

56. *Kumho*, 526 U.S. at 142.

57. *Id.*

58. The Court noted:

Carlson's depositions relied upon certain features of tire technology that are not in dispute. A steel belted radial tire like the Carmichaels' is made up of a "carcass" containing many layer of flexible cords, called "plies," along which (between the cords and the outer tread) are laid steel strips called "belts."

*Id.*

59. *Id.* at 143. ("Carlson's testimony also accepted certain background facts about the tire in question. He assumed that before the blowout the tire had traveled far . . . He conceded that the tire tread had at least two punctures which had been inadequately repaired.")

60. *Id.* at 144.

61. *Id.* at 143-44. Carlson relied on three premises:

First, a tire's carcass should stay bound to the inner side of the tread for a significant period of time after its tread depth has worn away. Second, the tread of the tire at issue had separated from its inner steel-belted carcass prior to the accident. Third, this "separation" caused the blowout.

*Id.* (citations omitted).

The defendants challenged several propositions which led to Carlson's conclusion.<sup>62</sup> Carlson indicated that if overdeflection<sup>63</sup> does not cause separation,<sup>64</sup> then separation is likely caused by a tire defect.<sup>65</sup> Further, if the tire has suffered from overdeflection, it will show at least two of four physical symptoms.<sup>66</sup> After inspecting the tire and using these propositions, Carlson determined that the tire did not have two or more of the symptoms needed to indicate overdeflection.<sup>67</sup> Accordingly, because (1) the tire did not have the necessary indications of overdeflection and (2) no evidence indicated that punctures caused the failure, Carlson testified that a defect in the tire must have caused the failure.<sup>68</sup>

The district court, concerned that the method Carlson used was insufficiently reliable under Rule 702, concluded that the testimony was inadmissible, and granted the defendants summary judgment.<sup>69</sup> The Eleventh Circuit reversed, holding that the district court's use of *Daubert's* reliability factors was incorrect because *Daubert* was limited to scientific experts relying on scientific principles and did not apply to experience-based testimony.<sup>70</sup>

The Supreme Court "granted certiorari in light of uncertainty among the lower courts about whether, or how, *Daubert* applies to expert testimony that might be characterized as based not upon 'scientific' knowledge, but rather upon 'technical' or 'other specialized' knowledge."<sup>71</sup> The Court held that the *Daubert* gatekeeper analysis should be applied broadly and should be applied to all experts, whether using scientific or experience-based knowledge.<sup>72</sup> The Court further held that the *Daubert* gatekeeper analysis encompassed all experts for three reasons.<sup>73</sup> First, the language of Rule 702 makes no distinction between scientific and experience-based testimony.<sup>74</sup> Second, the rationale underlying *Daubert's* analysis was itself not limited to one specific type of knowledge.<sup>75</sup> Finally, the difficulty in determining where one crossed the line

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62. *Id.*

63. Overdeflection "consists of underinflating the tire or causing it to carry too much weight, thereby generating heat that can undo the chemical tread/carcass bond." *Id.* at 144.

64. Separation occurs when the tire's carcass does not stay bound to the inner side of the tread. *Id.*

65. *Id.*

66. *Id.* The following symptoms indicated overdeflection: (1) tread wear on the tire's shoulder greater than that in the center, (2) "signs of a bead groove," (3) sidewalls with tire deterioration, and (4) "marks on the tire's rim flang." *Id.*

67. *Id.*

68. *Id.* at 145.

69. *Id.*

70. *Id.* at 146.

71. *Id.*

72. *Id.* at 147. For a discussion of the *Daubert* analysis, see *supra* Part II.B.1.

73. *Kumho*, 526 U.S. at 147-48.

74. *Id.* at 147.

75. *Id.* at 148.



between scientific and experience-based knowledge would prove insurmountable for judges.<sup>76</sup>

*Kumho* also made it clear that the factors used to determine whether an expert's testimony is reliable should be determined on a case by case basis.<sup>77</sup> The *Daubert* factors are not an exhaustive checklist, nor are they always applicable. In fulfilling its gatekeeper role, the trial court should select the factors that provide a reasonable measure of reliability in the case involved.<sup>78</sup> No single test for reliability exists:

[W]e can neither rule out, nor rule in, for all cases and for all time the applicability of the factors mentioned in *Daubert*, nor can we now do so for subsets of cases categorized by category of expert or by kind of evidence. Too much depends upon the particular circumstances of the particular case at issue.<sup>79</sup>

Finally, the Court held that appellate courts should continue to use the abuse of discretion standard set forth in *Joiner* when reviewing the trial court's decision on expert testimony. The Court stated: "The trial court must have the same kind of latitude in deciding *how* to test an expert's reliability . . . as it enjoys when it decides *whether* that expert's relevant testimony is reliable."<sup>80</sup> The Court granted broad discretion to the trial courts in ascertaining whether the *Daubert* factors are a reasonable measure of reliability in each case.<sup>81</sup>

Applying this approach to Carlson's testimony in *Kumho*, the Court found the district court's decision reasonable, stating: "Those transcripts cast considerable doubt upon the reliability of both the explicit theory (about the need for two signs of abuse) and the implicit proposition (about the significance of visual inspection in this case)."<sup>82</sup> Therefore, the trial court was within its discretion in refusing to allow Carlson to testify.<sup>83</sup> Specifically, the Court pointed to the lack of proof indicating that other experts in the industry use Carlson's test, as well as Carlson's failure to satisfy any factors, *Daubert* or otherwise, that showed the reliability of his testimony.<sup>84</sup> Some showing of reliability was needed for the trial court to conclude that Carlson had sufficient knowledge to assist the jurors in this case.<sup>85</sup>

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76. *Id.*

77. *Id.* at 152.

78. *Id.* at 151.

79. *Id.* at 150.

80. *Id.* at 152.

81. *Id.* at 153.

82. *Kumho*, 526 U.S. at 154.

83. *Id.* at 155.

84. *Id.* at 156.

85. *Id.* at 158.

#### D. The Kumho Impact

Although lower federal courts vary when applying *Kumho* to expert witness cases, the courts have not had any trouble incorporating *Kumho* into their already established *Daubert* analysis.<sup>86</sup> For those courts who already interpreted *Daubert* broadly and applied it to all experts, there is relatively little change. For those who had construed *Daubert* strictly, it is merely a matter of expanding their application. Further, all courts now have the opportunity to create their own factors in determining admissibility.

In *Westberry v. Gislaved Gummi AB*,<sup>87</sup> the Fourth Circuit considered expert testimony for the first time after *Kumho*. In *Westberry* the plaintiff alleged damages from exposure to talcum powder.<sup>88</sup> The powder was used on rubber gaskets manufactured by GGAB, the company for which Westberry worked.<sup>89</sup> Westberry claimed he was not warned of any danger and therefore did not wear any type of protective clothing or gear.<sup>90</sup> The expert witness in the case was Westberry's treating physician who testified about Westberry's sinus problem.<sup>91</sup> The Fourth Circuit cited *Kumho* several times in its general discussion regarding the admissibility of the expert's testimony, including reference to the discretion left to the court to determine the relevant factors.<sup>92</sup> The court found that: "[t]he [trial] court has broad latitude to consider whatever factors bearing on validity that the court finds to be useful; the particular factors will depend upon the unique circumstances of the expert testimony involved."<sup>93</sup>

The Fourth Circuit, basing its opinion on *Kumho*, opted not to use the list of factors in *Daubert* when determining whether to allow the testimony.<sup>94</sup> Instead, the court focused on the particular circumstances of the case to determine that it would be more useful to consider factors<sup>95</sup> other than those mentioned in *Daubert*. Recognizing that *Kumho* gave the option of selecting factors, the court affirmed the trial court's decision to admit the doctor's testimony based in part on the temporal relationship between exposure and the

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86. See *Black v. Food Lion, Inc.*, 171 F.3d 308 (5th Cir. 1999); *Curtis v. M&S Petroleum, Inc.*, 174 F.3d 661 (5th Cir. 1999).

87. 178 F.3d 257 (4th Cir. 1999).

88. *Id.* at 260.

89. *Id.*

90. *Id.*

91. *Id.*

92. *Id.* at 261.

93. *Id.*

94. *Id.* at 263.

95. The court wrote: "We previously have upheld the admission of an expert opinion on causation based upon a differential diagnosis." *Id.* The court noted that differential diagnosis "has widespread acceptance in the medical community, has been subject to peer review, and does not frequently lead to incorrect results." *Id.* at 262 (quoting *Brown v. Southeastern Penn. Transp. Auth.*, 35 F.3d 717, 758 (3d Cir. 1994)).

problems<sup>96</sup> rather than refusing to admit the testimony for lack of studies or peer review.<sup>97</sup> The Fourth Circuit determined that in this case the temporal relationship alone satisfied the reliability prong of Rule 702; therefore, it was “a valid foundation for an expert opinion.”<sup>98</sup>

The Fifth Circuit has also recently used *Kumho*. Both *Curtis v. M&S Petroleum, Inc.*<sup>99</sup> and *Black v. Food Lion, Inc.*<sup>100</sup> deal with the use of expert witnesses. In *Curtis*, an industrial hygienist was going to testify as an expert that the plaintiff’s exposure to benzene caused the plaintiff’s symptoms and long-term health problems.<sup>101</sup> The trial court did not allow the testimony because “it did not satisfy the requirements set forth in *Daubert*.”<sup>102</sup>

The Fifth Circuit reversed, stating that the district court abused its discretion in excluding the expert’s testimony.<sup>103</sup> Reviewing the *Daubert* factors,<sup>104</sup> the court held that the testimony was admissible because the expert showed several scientific studies as support and pointed to a strong temporal connection between exposure and the onset of symptoms.<sup>105</sup> As in *Westberry*, the court looked at the *Daubert* factors, as well as factors of its own, to determine admissibility.<sup>106</sup> However, *Kumho* ultimately did not alter the outcome of the case.<sup>107</sup>

The Fifth Circuit again applied *Kumho* in *Black v. Food Lion, Inc.*<sup>108</sup> In *Black*, the plaintiff slipped on mayonnaise while shopping in Food Lion.<sup>109</sup> The plaintiff’s expert witness diagnosed her with fibromyalgia syndrome and hypothesized that it was caused by Black’s fall at the store.<sup>110</sup> Against Food Lion’s objections, the trial court allowed the expert to testify.<sup>111</sup>

The Fifth Circuit interpreted *Kumho* to hold that the *Daubert* factors can be used in all appropriate cases and that the court should come up with its own factors in those cases in which the *Daubert* factors are not appropriate.<sup>112</sup> The Fifth Circuit stated: “In the vast majority of cases, the district court first should

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96. The court focused on the fact that differential diagnosis is generally accepted in the medical community, stating that differential diagnosis “is a standard scientific technique of identifying the cause of a medical problem. . . .” *Id.* at 262.

97. *Id.* at 262.

98. *Id.* at 263.

99. 174 F.3d 661 (5th Cir. 1999).

100. 171 F.3d 308 (5th Cir. 1999).

101. *Curtis*, 174 F.3d at 668.

102. *Id.*

103. *Id.* at 672.

104. The court found that *Kumho* did not apply, stating “*Kumho* does not affect the result here, because the instant case involves what is undeniably scientific evidence.” *Id.* at 668 n. 5.

105. *Id.* at 670.

106. *Id.* at 668-69.

107. *Id.* at 668 n.5.

108. 171 F.3d 308 (5th Cir. 1999).

109. *Id.* at 309.

110. *Id.*

111. *Id.* at 310.

112. *Id.* at 311-12.

decide whether the factors mentioned in *Daubert* are appropriate. Once it considers the *Daubert* factors, the court then can consider whether other factors, not mentioned in *Daubert*, are relevant to the case at hand.<sup>113</sup> Following this reasoning, the court held that the expert's testimony failed to meet the *Daubert* factors and that the trial judge did not indicate any other factors which would be more appropriate.<sup>114</sup> Thus, the magistrate judge abused his discretion in admitting the expert's testimony.<sup>115</sup>

The broad discretion given trial judges when determining whether to admit expert testimony has a two-edged effect. On the one hand, discretion may create a wide range of results in similar cases. For example, one federal court judge may allow testimony about a controversial new study while another will opt to exclude such testimony. Ultimately, this could lead to a great deal of uncertainty for litigators when selecting expert witnesses. On the other hand, case by case analysis appears both practical and necessary because it would be nearly impossible for the Supreme Court to create a test which would be appropriate for all types of issues and for all types of expert testimony.

Most scholars question the unpredictability of the *Kumho* analysis. As one commentator has noted: "The lack of an objective standard, combined with the lack of a minimum standard for the scientific proficiency of litigators and judges, defies a basic goal of the law, namely to make the outcome of a *Daubert* hearing predictable."<sup>116</sup> Thus, the concern is that *Kumho* creates more confusion rather than less. William Latham writes: "More judicial discretion means more uncertainty for litigants and more 'wobble room' for use by zealous advocates in arguing both for and against the admissibility of particular expert testimony. In this regard, *Kumho* it seems, raises more questions than it answers."<sup>117</sup>

### III. SOUTH CAROLINA'S SCHEME

#### A. South Carolina Rule 702 and Application

South Carolina Rule of Evidence 702 is identical to the federal rule.<sup>118</sup> However, although the language is identical to its federal counterpart, the South

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113. *Id.*

114. *Id.* at 312.

115. *Id.*

116. Marilee M. Kapsa & Carl B. Meyer, *Scientific Experts: Making Their Testimony More Reliable*, 35 CAL. W. L. REV. 313, 331 (1999); see also Kimberly M. Hrabosky, *Kumho Tire v. Carmichael: Stretching Daubert Beyond Recognition*, 8 GEO. MASON L. REV. 203 (1999); K. Issac de Vyver, *Opening the Door But Keeping the Lights Off: Kumho Tire Co. v. Carmichael and the Applicability of the Daubert Test to Nonscientific Evidence*, 50 CASE W. RES. L. REV. 177 (1999).

117. William H. Latham, *The "Gatekeepers' Discretion": Flexible Standards on Admissibility of Expert Evidence in Wake of Kumho*, S.C. LAW., July-Aug. 1999 at 15, 19.

118. S.C. R. EVID. 702. The former Rule 43(m)(1) of the South Carolina Rules of Civil Procedure was also identical.

Carolina Supreme Court stated in *State v. Council*<sup>119</sup> that it did not follow *Daubert*.<sup>120</sup> South Carolina instead continued to follow its own precedent and to apply the South Carolina test for admissibility of expert testimony announced in *State v. Jones*<sup>121</sup> and further clarified in *State v. Ford*.<sup>122</sup> This approach has enabled South Carolina to avoid some of the questions of flexibility and applicability left unanswered by *Daubert*.

## B. The South Carolina Cases

### 1. State v. Jones

*State v. Jones* involved the admission of “bite mark” evidence to identify an attacker by comparing the bite marks on the victim’s body with the dental records of the accused.<sup>123</sup> The dental record testimony was given by a prosthodontist who had made dental impressions of the accused.<sup>124</sup> An odontologist then testified as a “bite mark” expert and compared these records with the bite marks.<sup>125</sup>

The South Carolina Supreme Court, noting that there was no showing that the techniques used “were other than accepted by the photographic and dental communities,”<sup>126</sup> found that the trial court had not abused its discretion in allowing this testimony to go to the jury.<sup>127</sup> According to the court, the decision to allow expert testimony is a matter within the discretion of the trial judge.<sup>128</sup> Holding that admissibility depends upon “the degree to which the trier of fact must accept, on faith, scientific hypotheses not capable of proof or disproof in court and not even generally accepted outside the courtroom,”<sup>129</sup> the South Carolina Supreme Court used a liberal standard of review and upheld the decision to allow the testimony.<sup>130</sup>

### 2. State v. Ford

The South Carolina Supreme Court addressed the admissibility of expert testimony again in *State v. Ford*.<sup>131</sup> In *Ford*, the defendant challenged the testimony of a deoxyribonucleic acid (DNA) analyst who testified that the

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119. 335 S.C. 1, 515 S.E.2d 508 (1999).

120. *Id.* at 20, 515 S.E.2d at 518.

121. 273 S.C. 723, 259 S.E.2d 120 (1979).

122. 301 S.C. 485, 392 S.E.2d 781 (1990).

123. *Jones*, 273 S.C. at 731, 259 S.E.2d at 124.

124. *Id.* at 731-32, 259 S.E.2d at 124-25.

125. *Id.*

126. *Id.* at 732, 259 S.E.2d at 125.

127. *Id.* at 731, 259 S.E.2d at 125.

128. *Id.* at 731, 259 S.E.2d at 124.

129. *Id.* (quoting *People v. Marx*, 126 Cal. Rptr. 350, 355-56 (Cal. Ct. App. 1975)).

130. *Id.* at 732, 259 S.E.2d at 125.

131. 301 S.C. 485, 392 S.E.2d 781 (1990).

DNA extracted from sperm found in a rape victim's underwear matched that of the defendant Ford.<sup>132</sup> Ford was an African-American on trial for rape and kidnapping.<sup>133</sup> DNA from sperm in the victim's underwear and in a vaginal swab taken from the victim matched the DNA found in Ford's blood sample.<sup>134</sup> The trial court admitted testimony of this match and testimony that this type of DNA match would only be found in one out of twenty-three million North American blacks.<sup>135</sup>

The South Carolina Supreme Court looked at several factors in deciding if this evidence was admissible under *Jones*, including (1) the publications and peer review of the technique; (2) prior application of the method to the type of evidence involved in the case; (3) the quality control procedures used to ensure reliability; and (4) the consistency of the method with recognized scientific laws and procedures.<sup>136</sup> The court concluded that the numerous articles documenting the DNA print test, the fact that other courts had allowed the test, that the tests were conducted in an established manner, and that even Ford conceded that the DNA tests had received general acceptance, rendered the testimony admissible.<sup>137</sup> Accordingly, the court held that the lower court had not abused its discretion when finding that the DNA evidence was admissible.<sup>138</sup>

### 3. State v. Council

In *State v. Council*,<sup>139</sup> the prosecution's expert testified that the results of mitochondrial DNA (mtDNA) testing performed on hairs found at the scene of an assault and murder implicated the defendant.<sup>140</sup> The expert described the complicated concept of mtDNA analysis to the jury and then explained that, though he had found a match of mtDNA between unrelated Caucasians, he had never found a match between unrelated African-Americans.<sup>141</sup> Based on this analysis the expert stated "that most probably the hair that was recovered from the crime scene belonged to appellant."<sup>142</sup> The trial judge found this evidence admissible under the approach to Rules 702 and 703 adopted in *Jones* and *Daubert*.<sup>143</sup>

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132. *Id.* at 487, 392 S.E.2d at 782.

133. *Id.* at 486, 392 S.E.2d at 782.

134. *Id.* at 487, 392 S.E.2d at 782.

135. *Id.* at 488, 392 S.E.2d at 783.

136. *Id.* at 488-90, 392 S.E.2d at 783-84.

137. *Id.* at 488-89, 392 S.E.2d at 783.

138. *Id.* at 490, 392 S.E.2d at 784.

139. 335 S.C. 1, 515 S.E.2d 508 (1999).

140. *Id.* at 17, 515 S.E.2d at 516.

141. *Id.* at 18, 515 S.E.2d at 517.

142. *Id.* at 18-19, 515 S.E.2d at 517.

143. *Id.* at 19, 515 S.E.2d at 517.

The South Carolina Supreme Court held that the trial judge did not abuse his discretion under Rule 702 and *Jones*:

While this Court does not adopt *Daubert*, we find the proper analysis for determining admissibility of scientific evidence is now under the SCRE [South Carolina Rules of Evidence] . . . under Rule 702, SCRE, the trial judge must find the evidence will assist the trier of fact, the expert witness is qualified, and the underlying science is reliable. The trial judge should apply the *Jones* factors to determine reliability.<sup>144</sup>

Applying the *Jones* factors laid out in *Ford*,<sup>145</sup> the Supreme Court noted that the evidence would help the jury, that mtDNA testing has been subject to peer review, that the F.B.I. has determined the rate of error, and that the science has been accepted by the scientific community.<sup>146</sup> Since the testimony regarding the mtDNA test met these criteria, the court deemed the testimony admissible.<sup>147</sup>

### C. *The Post-Kumho Impact on South Carolina and Council*

Thus, South Carolina has addressed the same issue as the United States Supreme Court addressed in *Kumho*—what is the best approach for formulating a rule for admissibility of expert testimony that works for all situations. There are two possible approaches to this task: (1) use a flexible test, which will apply to all expert testimony but which may cause uncertainty and variations in application, or (2) adopt a more rigid test that will achieve more certainty, but which may result in arbitrary, mechanical decisions. *Kumho* followed the approach of *Daubert* and *Joiner* and opted for the flexible approach to all expert testimony. Though South Carolina has not yet dealt with many of the issues addressed in *Kumho*, it appears that South Carolina is, at least, moving toward a flexible approach.

Like the United States Supreme Court in *Daubert* and in *Kumho*, South Carolina has adopted a factor-based test for determining the admissibility of expert testimony. The *Jones* factors originally formulated in *Ford*<sup>148</sup> ultimately turn out to be very similar to the *Daubert* factors. Moreover, the approach using the factors in *Council* shows a great similarity to the *Daubert* approach. The court in *Council* found that mtDNA testing has been subject to peer review.<sup>149</sup>

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144. *Id.* at 20, 515 S.E.2d at 518.

145. *See supra* Part III.B.1-2.

146. *Council*, 335 S.C. at 20, 515 S.E.2d at 518.

147. *Id.* at 21, 515 S.E.2d at 519.

148. The *Jones* factors consist of publications and peer review of the technique, prior application of the method, the quality control procedures used, and the consistency of the method with recognized scientific laws and procedure. *See Ford*, 273 S.C. at 487, 392 S.E.2d at 782.

149. *Council*, 335 S.C. at 21, 515 S.E.2d at 518.

They also stated the “F.B.I. laboratory validated the process and determined its rate of error,”<sup>150</sup> and that the “underlying science has been generally accepted in the scientific community.”<sup>151</sup> The *Daubert* analysis of admissibility contains a similar focus on peer review, known or potential rate of error, the theory’s general acceptance, and whether the theory can be tested.<sup>152</sup>

It should be noted that, though South Carolina has adopted a multi-factor scheme like that used in *Daubert*, *State v. Council* held that the Court would not adopt *Daubert*.<sup>153</sup> An advantage of this approach is that South Carolina can independently develop its own scheme for evaluating expert witness testimony without having to decipher vague cases like *Daubert*.

Though South Carolina has not finished formulating its approach for the admissibility of expert testimony, it has already approached many of the issues. As to the issue of the standard of review for expert testimony, South Carolina has held that the admissibility of an expert’s testimony is within the discretion of the trial judge.<sup>154</sup> Thus, the standard in South Carolina is the same as that adopted by the United States Supreme Court in *Joiner*.

Numerous South Carolina cases adopt a deference to the trial court’s discretion in allowing experts to testify. One such case was *Small v. Pioneer Machinery, Inc.*,<sup>155</sup> in which Small was injured in a logging accident when a tree limb fell on him.<sup>156</sup> At the time, Small was trying to remove his saw from the tree in which it was stuck.<sup>157</sup> His coworker placed the blade of his skidder against the tree in an effort to help Small release the blade.<sup>158</sup> Once the blade was released, Small heard the motor start which caused the tree to fall.<sup>159</sup> Small alleged that the log skinner was defectively designed causing its throttle to stick and, ultimately, to push the tree over.<sup>160</sup> Small’s expert witness, basing his testimony on Small’s and the coworker’s testimony, as well as his review of the design documents, hypothesized that the design of the skidder was defective.<sup>161</sup> Over defendant’s objections that the expert did not have the proper factual foundation, the trial court allowed the expert’s testimony.<sup>162</sup> The court of appeals agreed and stated: “The qualification of an expert witness and the admissibility of an expert’s testimony are matters within the trial court’s

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150. *Id.* at 21, 515 S.E.2d at 518.

151. *Id.* at 19, 515 S.E.2d at 518.

152. *Daubert*, 509 U.S. at 593-94. For *Daubert* analysis see *supra* Part II.B.1.

153. *Council*, 335 S.C. at 20, 515 S.E.2d at 518.

154. See *McGee v. Bruce Hosp. Sys.*, 321 S.C. 340, 347, 468 S.E.2d 633, 638 (1996); *Creed v. City of Columbia*, 310 S.C. 342, 344-45, 426 S.E.2d 785, 786 (1993); *Hill v. Carolina Power & Light Co.*, 204 S.C. 83, 106, 28 S.E.2d 545, 553 (1943).

155. 329 S.C. 448, 494 S.E.2d 835 (Ct. App. 1997).

156. *Id.* at 455, 494 S.E.2d at 838.

157. *Id.*

158. *Id.*

159. *Id.*

160. *Id.*

161. *Id.* at 469, 494 S.E.2d at 846.

162. *Id.* at 468, 494 S.E.2d at 845.



discretion . . . the trier of fact determines its probative value."<sup>163</sup> Thus, the appellate court deferred to the trial court and found no abuse of discretion.

A similar approach was adopted in *State v. Register, II*,<sup>164</sup> in which the expert testified regarding an analysis of DNA found on the victim performed by the South Carolina Law Enforcement Division (SLED).<sup>165</sup> The examination consisted of a five-probe analysis of the DNA which revealed a strong match between Register's DNA and the DNA found on the victim.<sup>166</sup> An expert testified that such a strong match was rare.<sup>167</sup> Register objected to the admissibility of the expert testimony, alleging that the method used by SLED to determine probability was unreliable and, therefore, should not be admitted.<sup>168</sup> The Supreme Court upheld the trial judge's admission of the expert testimony, stating:

[T]he judge concluded that the techniques used by SLED in developing the database and in determining the probability of finding Register's particular DNA pattern were based on generally accepted scientific principles. Accordingly, the judge admitted the evidence after determining that the jury, after hearing testimony by the experts, could make its own decision as to the reliability of the statistics. We find no error in its admission.<sup>169</sup>

#### IV. CONCLUSION

*Kumho* appears to have ended the debate on the flexibility and application of *Daubert* to the admissibility of expert testimony. The potential problems *Kumho* creates for determining whether an expert should testify, such as the lack of uniformity and predictability, may not be problems at all since the admissibility of expert testimony has long been within the trial judge's discretion. *Kumho* may simply reinforce the district courts' power and flexibility to determine factors of admissibility. South Carolina, never having adopted *Daubert*, will likely remain unaffected.

Both *Daubert* and *Kumho* addressed the problem of providing a test for determining the admissibility of expert testimony that is both applicable to all cases and specific enough to provide a reasonable level of certainty and equality. There are so many types of experts on so many different subjects that it is nearly impossible to devise a uniform test or an exhaustive list of factors.

163. *Id.* at 469-70, 494 S.E.2d at 846 (citation omitted).

164. 323 S.C. 471, 476 S.E.2d at 153 (1995).

165. *Id.* at 474, 476 S.E.2d at 155.

166. *Id.*

167. *Id.* at 475, 476 S.E.2d at 156.

168. *Id.* at 481, 476 S.E.2d at 159.

169. *Id.* at 482, 476 S.E.2d at 159.

Because the courts simply cannot give a definitive answer on a subject with so many variables, a case-by-case analysis should logically prevail; however, it may lead to uncertainties in expert testimony admissibility. Giving the trial courts the “gatekeeper” role allows trial courts the discretion to decide whether an expert’s testimony is relevant and reliable, but also prevents any type of uniform analysis among the courts and may cause uncertainty among practitioners. At present, the balance tips in favor of the argument that the lack of an objective standard will lead to more confusion rather than less.

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