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## **IX.**

### **DAUBERT AND TOXIC TORTS**

by **John J. Delany, III and Beth Anne Cusack**

*"In the view of evidence now entertained by the best authorities, it is settled that a jury should be allowed to have placed before them all the means of knowledge which can be had without involving the danger of leading them to form conclusions not based on solid truth and not reliable as reasonably certain*

*-Justice Campbell*

*Evans V. People, 12 Mich.  
36 (1858).*

#### **BACKGROUND OF SCIENTIFIC EVIDENCE**

Generally, witnesses are not permitted to testify as to their opinions. They are only permitted to testify to their firsthand knowledge of the *facts*. Because the jury is the ultimate trier of the *facts* in a case, any conclusions to be drawn from the evidence are not to be offered by any witness, but instead must be left in the province of the jury. However, certain issues are, by their nature, beyond the average experience of the men and women of the jury.<sup>1</sup> In 1858, Justice Campbell succinctly articulated this issue when he asked, "how far is it safe to suppose unprofessional observers are able to form a reliable judgment"<sup>2</sup>

Often, an intelligent evaluation of facts is difficult, if not impossible, without the application of some scientific, technical, or other specialized knowledge.<sup>3</sup> The most common source of this knowledge is the expert witness.<sup>4</sup> Therefore, experts are permitted to testify as to their opinion where laymen jurors, in their ordinary experience, would be incapable of acquiring the knowledge and/or forming the opinions necessary to analyze the facts of the case. Such expert "assistance" in the evaluation of the evidence is essential in cases with complex issues, such as toxic tort causation or psychological damages.

The use of expert opinion has expanded with the continuous and rapid progress of science, which has opened up new areas of scientific proof.<sup>6</sup> New developments involve new sources of litigation, the resolution of which requires expert knowledge.<sup>7</sup> Concerns involving the expert witness include the qualifications of the expert, the data used in forming the opinion, the methodologies applied and the accuracy of the opinion.<sup>8</sup> Initially, the primary concern with regard to expert testimony was the credentials of the expert and what made one qualified to testify as an expert on the stand; however, today the concern revolves not around credentials, but around data and methodologies.

## THE FRYE RULE

As the debate about experts continued to unfold during the 1920's, the Court of Appeals of the District of Columbia heard Frye v. United States, involving an appeal from a conviction for second degree murder.<sup>10</sup> At trial, the defendant sought the admission of the results of a lie detector's test, or what was then referred to as a "systolic blood pressure deception test"<sup>11</sup> The government objected to the evidence, and their objection was sustained.<sup>12</sup> On appeal, the court noted the novelty of the issue and that there were no cases directly on point.<sup>13</sup> In its analysis, the court held that:

"Just when a scientific principle or discovery crosses the line between the experimental and demonstrable stage is difficult to define. Somewhere in this twilight zone the evidential force of the principle must be recognized, and while the courts will go a long way in admitting expert testimony deduced from a well-reasoned 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>14</sup>

This brief, two-page opinion not only articulated the "general acceptance standard" that governed the admissibility of scientific evidence throughout the country for over 70 years, but also pinpointed the exact issues which still plague the admissibility of scientific evidence today.

This standard, known as the Frye rule, became the dominant standard for determining the admissibility of scientific evidence in the majority of courts around the country.<sup>15</sup> Given the rapidity of scientific advances, the Frye rule could have imposed significant problems for novel scientific evidence which, although reliable, would be so new that general acceptance in the scientific community was not yet possible.<sup>16</sup> However, because such strict application of the Frye rule would have served to exclude evidence, many courts "modified, distinguished, ignored or rejected" the standard.<sup>17</sup> Therefore, the admissibility of scientific evidence never seemed to suffer.

## FRYE AND THE FEDERAL RULES

The Federal Rules of Evidence were passed in 1975 to replace the common law of evidence, with Rule 702 specifically addressing the admissibility of scientific evidence.<sup>18</sup> Despite the significant controversy that scientific evidence generated and continues to generate to this day, Congress made no change to Federal Rule 702 and it was not the subject of floor debate.<sup>19</sup> Moreover, Rule 702 was seen as "liberalizing expert testimony,"<sup>20</sup> drawing many observers to note that there were more restrictions on opinion evidence before the Rule.<sup>21</sup>

the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, expertise, training, or education, may testify thereto in the form of an opinion or otherwise.<sup>35</sup>

Interpreting this language, the Court held that there were two separate requirements expressed in the language of Rule 702.<sup>36</sup> First, Rule 702 requires "scientific knowledge," which the Court noted established the standard of evidentiary reliability and trustworthiness.<sup>37</sup> The Court held that as used in the Rule, the term "scientific"

meant grounded in the methods and procedure of science, and the term "knowledge" meant more than subjective belief or unsupported speculation.<sup>38</sup> The second requirement expressed in the Rule was that the evidence "assist the trier of fact to understand the evidence or to determine a fact in issue."<sup>39</sup> The Court noted that this requirement was grounded in relevance and requires that the evidence be sufficiently tied to the case at hand with a valid scientific connection to the pertinent inquiry.<sup>40</sup> Through this interpretation, the Court annunciated the new standard for the admissibility of scientific evidence.

### **Preliminary Determination And Considerations**

Next, the Court delineated the proper procedure for applying Rule 702 under those standards. Specifically, the Supreme Court noted that Rule 702 required a preliminary determination, pursuant to Rule 104, that the expert is proposing to testify to scientific knowledge that will assist the trier of fact.<sup>41</sup> Focusing on evidentiary relevance and reliability, this preliminary determination requires an assessment of whether the reasoning and/or methodology underlying the testimony is scientifically valid and whether that reasoning and/or methodology can reasonably be applied to the facts in issue.<sup>42</sup> The Court emphasized that the focus was on the principles and methodology, and not the conclusions, of the scientific evidence.<sup>43</sup> In making this determination, the Court noted five considerations that the trial judge may take into account.<sup>44</sup> Among other things, the judge may consider:

1. Whether the scientific theory or technique can be and has been tested;
2. Whether it has been subject to publication and/or peer review;
3. The known or potential rate of error;
4. The existence and maintenance of standards controlling the technique's operation; and
5. General acceptance in the scientific community.<sup>45</sup>

Noting that the last delineated criteria was the Frye "general acceptance" standard, the Court stated that although Frye no longer controls, it is still a potentially important consideration for reliability.

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#### Judge As Gatekeeper

In the end, the Court noted the importance of the trial court's role as "gatekeeper" to the admission of scientific evidence.<sup>47</sup> As gatekeeper, the trial judge ensures scientific evidence both rests on a reliable foundation and is relevant to the issues at hand.<sup>48</sup> The Court concluded by noting that "pertinent evidence based on scientifically valid principles will satisfy those demands."<sup>49</sup> However, the subsequent case law applying Daubert implies that it may not be that predictable.

## DAUBERT IN PRACTICE

Not only did the unanimous *certiorari* underscore the importance of and the controversy surrounding scientific evidence, but so did the 23 amicus briefs filed in the action.<sup>50</sup> The problems inherent in unreliable expert testimony have long been evidenced by rulings of virtually every federal circuit and every state appellate court.<sup>51</sup> Therefore, it is no surprise that, although Daubert is federal law, the Daubert decision is having a significant impact on state law as well. This is primarily occurring because many states have either adopted or based their own evidentiary rules on the Federal Rules of Evidence and/or the Frye rule. Therefore, although the case was only decided in 1993, over 375 cases throughout the country have cited Daubert.

After the opinion in Daubert was published, the petitioner's counsel commented that the opinion accomplished all of its goals by throwing out the Frye rule.<sup>52</sup> Following this line of thinking, it was originally surmised that the effect of Daubert would be to liberalize the admission of expert testimony, with the *Wall Street Journal* and other news media characterizing the decision as a loss for business/corporate defendants.<sup>3</sup> However, as the Daubert petitioners soon discovered when their experts were once again excluded on remand to the Ninth Circuit,<sup>54</sup> the application of Daubert has often had the opposite effect, sometimes devastating the plaintiff's case.

### Statistics In The Federal Courts

Approximately 212 cases in federal courts throughout the country have cited Daubert in criminal, contract, tort and many other categories of cases. Of those cases, only about 36, or 16.9 percent, were in the realm of, or related to, toxic torts. The statistical analysis of the Daubert progeny of cases is interesting because although Frye was considered to be an austere" standard and the Daubert decision was believed to be the beginning of a new period of even more liberal use of experts in the courtroom, this has not yet been realized. In fact, just the opposite effect has taken place.

Specifically, of those 36 federal cases applying Daubert to the toxic tort realm, only 8 cases, or 25 percent, were resolved in favor of the plaintiff. Therefore, contrary to the rhetoric and predictions, the toxic tort defendant was significantly more successful than the plaintiff under Daubert, obtaining favorable rulings under Daubert in 28 of the 36 cases, or approximately 75 percent of the time.<sup>55</sup> The original perception of Daubert as fostering the liberal admission of scientific evidence appears to have been incorrect. Accordingly, Daubert has developed into a critical defense tool in toxic tort litigation.

## Statistics In State Courts

As in federal courts, Daubert has been heavily cited in the state courts as well. As noted above, this is most often the result of the state's adoption of rules of evidence modeled after the Federal Rules, or the state's adoption of the Frye rule, or both. Therefore, although inherently federal law, the Daubert standards are guiding and sometimes governing state law on the admission of scientific evidence as well. At present, 35 states have at least acknowledged Daubert in their decisions on scientific evidence. Of those 35, eleven state jurisdictions have adopted Daubert as their new standard governing the admissibility of scientific evidence.<sup>56</sup> Six states have rejected Daubert outright and decided to remain with the Frye rule.<sup>57</sup> Finally, eighteen states have at least acknowledged Daubert, but have left open the issue of whether it will be adopted or rejected in their state.<sup>58</sup>

It is interesting to note that in the state opinions, Daubert was characterized as a more liberal rule broadening the standard for admissibility, and the Frye rule as more conservative and austere.<sup>59</sup> Therefore, as Daubert proves to be the more conservative standard, these states may reconsider their positions.

## KEY JUDICIAL DECISIONS

With the proclivity of jurisdictions analyzing, adopting and applying the Daubert standards, there are several critical decisions affecting the emerging toxic torts and the methodologies being used to prove these cases. Fortunately, there are several opinions within this progeny of cases, which apply the new Daubert standards to suits, involving the emerging toxic torts analyzed in this book. Several of those opinions are analyzed below.

### Chemical Sensitivity: Cavallo V. Star Enterprises

In Cavallo v. Star Enterprises, et al., the District Court for the Eastern District of Virginia applied the Daubert standards to a chemical sensitivity case involving jet fuel.<sup>60</sup> In Cavallo, the plaintiff claimed that a massive spill of aviation jet fuel from a storage tank at the defendant's facility resulted in airborne emissions of hydrocarbons which caused chronic injury.<sup>61</sup> After exposure, the plaintiff continued to complain of various, nonspecific symptoms which abated when she left the vicinity of the defendant's property, but renewed upon her return.<sup>62</sup> The plaintiff's expert concluded that the fuel spill "sensitized" the plaintiff to various volatile organic compounds and that the plaintiff developed increased sensitivity to various chemical irritants as a result of the spill.

The court, noting the unique potential of expert evidence to be both powerful and misleading, stated that in court, the science must do the speaking, not merely the scientist.<sup>64</sup> Applying the Daubert criteria, the court excluded the testimony of the plaintiff's toxicologist and immunologist and granted the defendant's motion for summary judgment.<sup>65</sup>

The court first reviewed the plaintiff's toxicologist report and noted the lack of fit between the studies relied upon by the plaintiff's toxicologist and the conclusions reached.<sup>66</sup> The court held that while Rule 702 does not necessarily mandate that the expert find a study linking the exact chemicals at the exact exposure levels with the exact illnesses at issue, Rule 702 does require that the expert demonstrate a scientifically valid basis for projecting the findings of a study identifying a different chemical-illness relationship to the proffered causal theory.<sup>67</sup> Because the plaintiff's toxicologist was unable to provide any scientifically valid basis to support his leap from the studies he relied upon to his conclusions about the case, the court found that the toxicologist's opinion was not "scientific knowledge" and therefore had to be excluded.<sup>68</sup>

The court next turned to the plaintiff's immunologist, who relied on differential diagnosis to reach his opinion that the plaintiff's exposure to the jet fuel was the cause of her illness. Acknowledging that the process of differential diagnosis was undoubtedly important to the question of specific causation, the court stated that if other causes could not be ruled out, than the "more probable than not" standard could not be met.<sup>69</sup> However, the court held that although it is important to "rule out" other causes, it is equally important to "rule in" the suspected cause, i.e., show that the suspected cause is capable of causing the injury.<sup>70</sup> Reviewing the immunologist's report, the court found that the immunologist's opinions were founded merely on the temporal connection between the spill and the development of the injury, and a subjective, unverifiable belief that jet fuel could cause these injuries.<sup>71</sup> Therefore, the court concluded that the plaintiff's immunologist did not base his opinion on the scientific method and his opinion was therefore inadmissible.<sup>72</sup>

### **Repetitive Stress: Aparicio V. Norfolk & Western Railway Co.**

In Aparicio v. Norfolk & Western Railway Co., the District Court for the Northern District of Ohio granted the defendant's motion for a directed verdict after finding the plaintiff's experts were insufficient.<sup>73</sup> The plaintiff was a railroad employee who worked as a laborer. The plaintiff's job was labor intensive and required him to use hand-operated tools and equipment, including power tools, that exposed him to shock and vibration.<sup>74</sup> The plaintiff complained of numbness and tingling in his wrists, and pain in his right elbow.<sup>75</sup> Ultimately, he was diagnosed with carpal tunnel syndrome, for which he underwent four surgeries, and medial and lateral epicondylitis of the right elbow.<sup>76</sup>

The plaintiff attempted to prove causation and negligence through the use of an expert in ergonomic bioengineering, a science which considers the risk factors of various tasks required for various work activities which could lead to cumulative trauma disorders.<sup>78</sup> The ergonomic bioengineer's opinion relied on data from the 1970's and 1980's which only indicated that the plaintiff's injuries "could and often do result" from repetitive activities, and that the tasks of the plaintiff's job "create the danger" of developing carpal tunnel

The defendant objected to the ergonomic engineer's testimony based on Daubert, but was overruled at trial.<sup>79</sup> However, on the defendant's motion for a directed verdict, the court found that this expert was insufficient to prove causation and the motion was granted. Therefore, although the initial Daubert motion was unsuccessful for the defense, their arguments ultimately prevailed.

### **Multiple Chemical Sensitivity: Summers V. Missouri Pacific Railroad System**

In Summers v. Missouri Pacific Railroad System, railway workers sued the railroad company alleging that they sustained long term effects as a result of short term exposure to diesel exhaust fumes.<sup>81</sup> The plaintiffs' expert concluded that the plaintiffs' suffered "toxic exposure to diesel fumes resulting in chemical sensitivity."<sup>2</sup> Specifically, the plaintiffs contended that they suffered from chemical sensitivity, a recognized medical diagnosis. However, the defendant contended that the true diagnosis of plaintiff's expert is "multiple chemical sensitivity" (MCS), a diagnosis which is not supported by sound scientific reasoning or methodology and which should be excluded under Daubert.<sup>84</sup>

This case is especially interesting because it focuses on the validity of a cause of action based on MCS. During its analysis, the court noted that the etiology of MCS was not known or tested.<sup>8~</sup> Moreover, the court noted that the scientific literature about MCS raised doubts with regard to the expert's methodology. Finally, the court concluded that the MCS conclusions were considered hypothetical. "slightly diluted speculation" resting on uncontrolled past speculation" and that MCS is not an actionable diagnosis.<sup>87</sup> The district court cited Bradley v. Brown.<sup>88</sup> a decision of the Seventh Circuit, in support of this conclusion and effectively extinguished all MCS cases until science advances.

In the end, the plaintiff's efforts to prove that its case was a chemical sensitivity case and not MCS failed and its experts were excluded at ~ Therefore, it appears that at this point, the evidence harnessed in the MCS line of cases is very vulnerable under Daubert.

### **Electromagnetic Fields: Reynard V. NEC Corporation**

The District Court for the Middle District of Florida applied the Daubert criteria to an electromagnetic field (EMF) case in Reynard v. NEC Corporation.<sup>90</sup> In Reynard, the representative of the plaintiff's estate sued a cellular phone retailer and system operator, alleging that an EMF emanating from the cellular phone either caused or accelerated/aggravated a brain tumor which killed the plaintiff.<sup>91</sup> After rendering all of the plaintiff's expert opinions on causation inadmissible, the court granted the defendant's motion for summary judgment.<sup>92</sup>

The plaintiff offered three experts in support of her case. First, the plaintiff offered the opinion of a neuropathologist. However, the neuropathologist was not able to determine causation and could not assign any probability to whether the exposure caused or contributed to the plaintiff's tumor.<sup>93</sup>

Next, the plaintiff offered the testimony of Dr. John Holt, whose specialty was never explicitly identified in the court's opinion. Dr. Holt proffered an opinion connecting the plaintiff's exposure to the EMF and the cancer. However, Dr. Holt's testimony was quite problematic. Dr. Holt was unable to render his opinion on causation with any degree of medical certainty.<sup>95</sup> Moreover, the court found that his theories were unorthodox and were not accepted in the scientific community. <sup>95</sup> Finally, the court noted that there were no clinical studies testing Dr. Holt's theories.<sup>96</sup>

Following this attack in the defense motion for summary judgment, the plaintiff proffered another expert to support Dr. Holt. However, the affidavit submitted by this expert was also deficient under the Daubert criteria.<sup>97</sup>

During the review of this rebuttal expert, the court noted three significant factors for determining whether an expert's testimony is admissible. First, the court must consider whether the experts are proposing to testify about matters growing naturally and directly out of research they have conducted independent of litigation, or whether they have developed their opinions expressly for the purposes of testifying.<sup>98</sup> Next, if the expert is not testifying based upon research independent of the litigation, the party proffering the evidence must come forward with other objective, verifiable evidence that the testimony is based on scientifically valid principles.<sup>99</sup> Finally, where there is no evidence that the expert's proffered testimony grows out of research conducted independent of litigation, or that the expert's research has been subjected to peer review, the testimony of other experts must be considered.<sup>100</sup>

Using these three factors, the court found the report of the plaintiff's rebuttal expert was inadmissible. The court noted that the expert's affidavit contained no reference to science or research by the expert conducted independent of the litigation.<sup>101</sup> Moreover, no other independent research was referenced and no peer review or publication cited.<sup>102</sup> Finally, the court noted that there was no objective source cited in the affidavit.<sup>103</sup> Therefore, the report could not pass the admissibility standards under Daubert and was inadmissible.<sup>104</sup>

## **PCB: In Re Paoli Railyard PCB Litigation ("PAOLI II")**

In re Paoli Railroad Yard PCB Litigation (hereinafter "Paoli II"), the Third Circuit revisited a PCB case to apply the Daubert standards. In Paoli II, there were thirty-eight plaintiffs who lived for many years in the vicinity of the Paoli Railyard, a railcar maintenance facility at which polychlorinated biphenyls (PCBs) were used in profusion for over a quarter of a century.<sup>105</sup> The plaintiffs sued to recover damages for a variety of physical ailments, and for property damage against the corporations that maintained the railyard and the corporations that sold the PCBs.<sup>103</sup>

Initially, summary judgment was granted by the District Court after the exclusion of almost all of the plaintiffs' experts.<sup>107</sup> However, the Third Circuit reversed and remanded that summary judgment in Paoli I for insufficient record to support the exclusion of the plaintiffs' experts.<sup>10</sup> On remand, the District Court conducted five days of in limine hearings and created a voluminous record.<sup>109</sup> Then, acting as the gatekeeper by applying Rule 702 and the Daubert principles, the District Court excluded the majority of the plaintiffs' expert evidence once again. <sup>110</sup> The plaintiffs appealed the exclusion of the majority of their evidence arguing that the judge improperly usurped the role of the jury.<sup>111</sup> Moreover, the plaintiffs asserted that for a judge to evaluate evidence for reliability before determining admissibility would force the plaintiffs to prove their case twice - once before the judge in order to get their evidence admitted, and once before the jury to prove liability.<sup>112</sup> To the contrary, the plaintiffs urged that only a *prima facie* showing of the reliability of the expert testimony is required.<sup>113</sup>

The Third Circuit disagreed in its eighty-two page Paoli II opinion. Initially, the court noted that the possibility of a lower burden was specifically foreclosed in Daubert when the Supreme Court required a Rule 104 preliminary determination of determine admissibility under Rule 702.<sup>114</sup> Next, the court noted that the plaintiff is not forced to prove its case twice because at the Daubert hearing, the plaintiff does not have to prove that their experts are correct, only that they are reliable.<sup>111</sup> Finally, the court noted that:

. . . the primary limitation on a judge's admissibility determination is that the judge should not exclude evidence simply because he or she thinks there is a flaw in the expert's investigative process which renders the expert's conclusions incorrect. The judge should only exclude the evidence if the flaw is large enough that the expert lacks 'good grounds' for his or her conclusion."<sup>116</sup>

Accordingly, the Third Circuit affirmed most of the District Court's determinations to exclude the plaintiff's experts.

## **Radiation: In Re TMI Litigation Cases Consolidated II**

In re TMI Litigation Cases Consolidated II, Judge Rambo of the Middle District of Pennsylvania excluded the majority of the plaintiffs' expert testimony.<sup>117</sup> Serving as the gatekeeper pursuant to Daubert, Judge Rambo served a devastating blow to the plaintiffs' case by excluding nine of eleven experts proffered by the plaintiffs.<sup>118</sup> The scientific evidence rejected by Judge Rambo as "unreliable under the Daubert standards" included soil studies, mortality studies and a calculation of dosage based on tree damage.<sup>119</sup> Judge Rambo carefully cited all of the five considerations recommended by the Supreme Court in Daubert as she rejected the plaintiffs' evidence.<sup>120</sup> In addition, Judge Rambo indicated that in order to convince the court of the reliability of the proffered testimony, the expert must directly and succinctly rebut challenges made and flaws exposed by the defendant's proposed findings. 1~1

Despite the fact that the plaintiffs made a motion for reconsideration, arguing that the court applied the new standards too narrowly,<sup>122</sup> Judge Rambo granted summary judgment to the defendants.<sup>123</sup> Standing by her original Daubert findings, Judge Rambo stated that:

The court has searched the record for any and all evidence which construed in the light most favorable to plaintiffs creates a genuine issues of material fact warranting submission of their claims to a jury. This effort has been in vain.<sup>124</sup>

Therefore, the application of Daubert once again devastated the plaintiffs' case and resulted in a summary judgment for the defendants.



## THE MECHANICS OF A DAUBERT CHALLENGE

This overview of the Daubert cases reveals the practical aspects of bringing a Daubert challenge. Some of the practical considerations and steps are analyzed below.

### Motion In Limine

As indicated in the Daubert opinion itself, the proper procedure for bringing a Daubert challenge is to make a motion in limine pursuant to Federal Rule of Evidence 104.125 In support of that motion, the parties submit affidavits, reports and any deposition testimony delineating the challenged expert's opinion.126As analyzed below, this information submitted to the court in support of or in opposition to an expert is critical in the Daubert analysis.

### Materials Supporting A Daubert Challenge

As noted above, when making a Daubert challenge, the party proffering the expert must submit an affidavit laying out the expert's opinion. In addition, any other discovery relevant to the expert's opinion may be submitted, i.e., the expert's deposition, supporting studies, etc. In response to this information and in support of the Daubert challenge to the expert, the Daubert petitioner may submit expert affidavits analyzing and critiquing the challenged expert's credentials, methodologies, analysis, and the scientific validity for projecting the conclusions of a certain study to the case at hand. Of course, the Daubert petitioner, in submitting a rebuttal expert opinion, must be certain to adhere to the same Daubert criteria as the challenged expert.

### Motion For Summary Judgment

In general, expert testimony is required to prove that exposure to a toxic substance caused certain injury or illness.127 Therefore, a Daubert challenge to the plaintiff's experts, if successful, may result in the exclusion of all of the plaintiff's causation evidence. Because of this, it is often appropriate to bring a Motion for Summary Judgment with the Daubert Motions in limine to dispose of the case in such an event128

## THE EMERGING DAUBERT EXPERT

In the opinions applying Daubert, the courts carefully analyze and apply the five considerations delineated in the Supreme Court's opinion. As indicated above, those considerations are:

1. Whether the scientific theory or technique can be and has been tested;
2. Whether it has been the subject of publication and/or peer review;
3. The known or potential rate of error;
4. The existence or maintenance of standards controlling the technique's operation; and
5. General acceptance in the scientific community.129

In addition, the courts often cite the three considerations delineated in the Ninth Circuit's opinion in the remand of Daubert. First, the court must consider whether the experts are proposing to testify about matters growing naturally and directly out of research they have conducted independent of litigation, or whether they have developed their opinions expressly for the purpose of testifying.30 Under this consideration, "professional expert witnesses" lose credibility and the failure of an expert to come to their opinions about causation independent of their involvement in the litigation may render the expert unreliable. Next, if the expert is not testifying based

upon research independent of the litigation, then the party offering the testimony must come forward with some other objective, verifiable evidence that the testimony is based on scientifically valid principles.<sup>131</sup> Finally, where there is no evidence of the first two considerations, the testimony of other experts must be considered.<sup>132</sup>

Reviewing the opinions applying Daubert, certain factors affecting the Daubert analysis become clear. Some factors provide credibility and reliability to the expert's opinion and serve to immunize the expert's testimony from the Daubert challenge. Accordingly, these factors should be used when selecting an expert and highlighted when drafting the Daubert affidavit. However, there also identifiable "pitfall" factors which raise serious questions as to the expert's reliability and validity, and which often prove fatal under Daubert. Of course, these are the factors which must be avoided when selecting an expert and when preparing the Daubert affidavit. Each will be addressed below.

### **Factors Enhancing Expert Reliability & Validity**

There are several general factors which undoubtedly enhance the credibility of the expert. Each will be discussed below.

#### **PRINCIPLES AND METHODS OF THE SCIENTIFIC SPECIALTY**

First, the expert must rely on the principles and methods of the specialty on which the opinion is based. Many scientific specialties have professional organizations which establish standards for the methodology and analysis of that particular science; for example, Threshold Limit Values established by the American Conference of Governmental Industrial Hygienists; position papers of the American Academy of Microbiology and Immunology and American College of Physicians; and reports of the American College of Occupational and Environmental Medicine.<sup>133</sup> Therefore, whether the expert in question specializes in the science or not, if the expert draws conclusions or conducts testing or analyses based on a certain specialty, the expert must follow the guidelines and standards of that specialty or risk the reliability of the opinion.

#### **TESTING ON THE SPECIFIC SUBSTANCES IN QUESTION**

Secondly, testing on the specific chemicals or substances in question is always preferable to causation by analogy to another study of substances similar to the substances at issue, but not the substances themselves. Although this seems obvious, testing may not be complete or conclusive on a certain substance. Therefore, experts often try to avail themselves of testing done on substances which they consider comparable to the substance at issue. For example, in Cavallo v. Star Enterprises, one expert used the results of a study analyzing kerosene to draw opinions about alleged injuries from aviation fuel.<sup>134</sup> However, this type of causation by analogy is suspect and may prove fatal to reliability and/or validity of the expert opinion, as occurred in Cavallo.<sup>135</sup> Therefore, using experts or tests involving the specific causation in question is important.

#### **KNOWLEDGE OF THE SPECIFICS OF THE PLAINTIFF'S CASE**

Next, it is important that the expert being used is knowledgeable of the specifics of the plaintiff's case and references those specifics in his/her report. Again, this seems obvious; however, several experts in the cases analyzed above, although knowledgeable in their

specific scientific field, were ignorant of the specifics of the plaintiff's case.<sup>136</sup> This cast doubt on their credibility and on the credibility of their conclusions as they related to the specific case at hand.

#### **DISTINGUISHING THE PLAINTIFF**

Another important factor for the expert opinion is distinguishing the plaintiff from other individuals suffering from the specific injury or illness, who were not exposed to the substances in question. For example, in the EMF case Reynard v. NEC Corporation, the plaintiff suffered and eventually died from a brain tumor which the plaintiff attributed to her use of the defendant's cellular phone.<sup>137</sup> The defense, in support of its Daubert challenge to the plaintiff's experts, proffered an expert who analyzed the relevant medical and scientific literature, the plaintiff's medical records and Magnetic Resonance Imaging (MRI) films of the tumor, and epidemiological tests on cancer to ultimately conclude that there was nothing to distinguish either the plaintiff or the development of her cancer from any other cancer sufferer who had not used a cellular phone.<sup>138</sup> This type of analysis was specifically cited and quoted in the court's opinion and overrode the plaintiff's expert's opinion based on less compelling information.<sup>139</sup> In today's emerging toxic torts environment, where a causal relationship between the substance and the injury/illness begins more as a question than a scientifically proven fact, this type of evidentiary analysis is especially important.

#### **INDEPENDENT RESEARCH**

This general consideration mostly affects the initial selection of the expert. When reviewing expert credentials, avoid selecting an expert based solely on technical qualifications in a particular field or specialty. Instead, where possible, use an expert who, prior to and independent of the litigation, conducted studies on the specific causal relationship at issue in the case. Specifically mentioned in Ninth Circuit's opinion on the remand of Daubert and adopted by other courts applying the Daubert criteria, this selection criteria vouches for the credibility of the expert and reinforces the independence, reliability and validity of the expert and his/her conclusions.  
140

#### **ELEMENTS OF THE AFFIDAVIT**

In addition to the general considerations explained above, there are also certain specific pieces of information that should be included in the expert's affidavit in order to make it reliable scientific knowledge under the Daubert standards. Again these considerations may seem obvious as they mimic the specific standards delineated by the Supreme Court. However, many experts who have failed to adequately delineate these considerations failed under Daubert. Therefore, it is important to include the following information in the expert affidavit:

- (i) State that the conclusion or opinion rendered is "within a reasonable degree of medical certainty";
- (ii) Specifically state the conclusion of the independent research relied upon;
- (iii) Name the scientific scrutiny and peer review to which the studies or methodologies have been subjected; and
- (iv) Name the independent, objective sources supporting the conclusions reached.

## **Factors Detracting From Expert Reliability And Validity**

Before Daubert, certain questionable scientific methodologies often made their way into the court and in front of the jury. This resulted in the perception widely held today that "you get an 'expert' to testify to anything." As the courts analyze and review the scientific evidence under the new Daubert standards, questionable scientific methodologies which used to satisfy the Frye rule and Rule of Evidence 702 have failed under Daubert. Therefore, under the new Daubert standards, although you may be able to find an "expert" to *say* anything, they may not be able to testify to it in court.

Toward that end, there have been several suspect methodologies or techniques for scientific experts, which tend to prove fatal under Daubert. Each will be explained in turn below.

### **INEXPLICITLY STATING METHODOLOGY**

In the expert's affidavit, the expert must be explicit with regard to the methodology used in reaching his/her conclusions. Because questions with regard to methodology are at the heart of the Daubert case, specific methodology must be identified. Glossing over the specifics of the methodology used raises suspicion and leaves the conclusions ripe for review and criticism by another expert. 141

### **MISAPPLICATION OF AN ACCEPTED METHODOLOGY**

This consideration applies to the "fitness" requirement of Daubert. For example, although certain methodologies are accepted in the scientific community for certain purposes, that same accepted methodology may not be applicable to the case at hand. Therefore, although the methodology may be reliable, the application of that methodology to a certain case may not be.<sup>142</sup> This argument has been raised with some success with regard to animal studies. In Schmaltz v. Norfolk & Western Railway Co., the District Court for the Northern District of Illinois excluded the plaintiff's expert testimony based on animal studies and stated that the expert's opinion:

Fails to make clear why the incidence of eye irritation in rabbits exposed to high doses of atrazine could reasonably lead a doctor to conclude that an indirect exposure to atrazine could cause pulmonary or respiratory conditions in humans. 'The analytical gap between the evidence presented and the inferences to be drawn on the ultimate issue . . . is too wide' in the present case.<sup>143</sup>

Therefore, not only must the methodology be reliable and accepted, but also the application of that methodology to the case at hand must also be appropriate.

### **FAILING TO HAVE A SCIENTIFIC BASIS FOR RESEARCH BY ANALOGY**

Related to the issue regarding the application of methodologies, the failure to demonstrate a scientifically valid basis for projecting the

findings of a study identifying a different chemical- illness relationship onto another causal relationship is also problematic. Although it has been noted that Rule 702 under Daubert does not necessarily mandate that the expert find a study linking the exact chemicals at the exact exposure levels with the exact illness at issue, it does require that the expert demonstrate a scientifically valid basis for projecting the findings of a study identifying a different chemical-illness relationship to the proffered causal theory.

## **CHANGING A RELIABLE METHODOLOGY**

In addition to the problems created when an expert misapplies an accepted methodology, there are also problems when any steps of an accepted methodology are changed. In Paoli H, the Third Circuit noted that the scientific knowledge requirement, which mandates that the expert's conclusions be on good grounds, applies to each step of the expert's analysis.<sup>145</sup> Therefore, the Court continued, "any step that renders the analysis unreliable under the Daubert factors renders the expert's testimony inadmissible. This is true whether the step completely changes a reliable methodology or merely misapplies that methodology."<sup>146</sup>

## **STUDIES OR REPORTS WHICH "SUPPORT" THE CONCLUSIONS, RATHER THAN PROVIDE THE BASIS FOR THEM**

In connection with the requirements that the expert have conducted research independent of the litigation, criticism has also been levied by courts noting experts who cite studies or reports that provide after-the-fact "support" for the conclusion, not the basis for the conclusion.<sup>147</sup> This is problematic because it implies that the opinion was drawn first, and the science was found later in an effort to support that predetermined conclusion. This type of "litigation science" raises obvious concerns as to the reliability of the conclusions reached.

## **OPINION BASED ON TEMPORAL CONNECTION**

It is well settled that a causation opinion based solely on a temporal relationship is not derived from the scientific method and is therefore insufficient to satisfy the requirements of Rule 702. (148) Therefore, an opinion founded primarily on a temporal connection between an exposure and the development of symptoms is not sufficient to pass the requirements of Daubert. As all of these factors illustrate, the Daubert analysis is influenced not only by the science at issue, but also by the proper presentation of that science to the Court.

## **CONCLUSION**

Although initially believed to be a new, more liberal approach to the admissibility of scientific evidence, Daubert has proven to be a rigorous analysis of scientific evidence. As indicated above, in the realm of toxic tort cases, the plaintiff's experts were excluded in over 75 percent of the cases where Daubert challenges were raised. Moreover, the more troubling "scientific" techniques formerly admitted under the old standards are being found unreliable and therefore inadmissible. Although some may argue that the stricter standards will prejudice plaintiffs by withholding groundbreaking science from the jury, this is an old and often-used argument under all of the evidentiary standards, from Frve to the Federal Rules and now to Daubert. The 1981 response to this concern by the Seventh Circuit, as it reaffirmed its adherence to Frve, is strangely still appropriate: "the trial court should not be used as a testing ground for theories supported neither by prior control experiments nor by calculations with indicia of reliability."<sup>149</sup>

## **ENDNOTES**

1. WEINSTEIN & BERGER, WEINSTEIN'S EVIDENCE, United States Rules 3 Sec. 702-2 (1992).

2. JOHN HENRY WIGMORE, EVIDENCE IN ~ AT COMMON LAW, Sec. 568 (3rd Ed.Supp.

1990), *citing* Evans v. People, 12 Mich. 36 (1858).

3. WEINSTEIN & BERGER, WEINSTEIN'S EVIDENCE. United States Rules 3, Sec. 702-2 (1992).

4. *Id.*

5. Wigmore, *supra* note 2, at Sec. 568, *citing* Evans V. People, 12 Mich. 36 (1858).

6. YO~GER & GOLDSMITH. PRINCIPLES OF EVWENCE at p.187 (National Practice Institute

1984, *quoting* L~D, *When May Expert Testimony Be Used?*, 5 Vand. L. Rev. 414,  
417-419 (1952).

7. *Id.* at 188.

8. As used here, the term "accuracy of the opinion" means the ability of the Opinion to offer a reasonable probability, not merely conjecture or speculation.

9. *Id.*

10. Frye v. United States, 293 F. 1013 (D.C.Cir. 1923).

11. *Id.*

12. *Id.* at 1014.

**13. *Id.***

**14. *Frye, 293 F. at 1014.***

**15. *Laura E. Ellsworth, Laying Foundation Under Daubert (How to Establish Absence of Cause & Effect), in environmental AND Chemical Exposure SEMINAR (DRI 1995);***

***YOUNGER AND GOLDSMITH, PRINCIPLES OF EVIDENCE (National Practice Institute, Inc.***

**1984).**

**16. *YOUNGER AND GOLDSMITH, PRINCIPLES OF EVIDENCE (NATIONAL PRACTICE INSTITUTE, INC.***

**1984).**

**19.**

**20.**

**21.**

**22.**

**23.**

**24.**

**17. *Id., citing McCormick. Scientific Evidence: Defining a New Approach to Admissibility 67 Iowa L.Rev. 879.904 (1982).***

18. *Daubert v. Merrell Dow Pharmaceuticals*, 113 S. Ct. 2786, 125 L. Ed. 2d 469, 477 (1993), *citing* *United States v. Abv*, 469 U.S. 45.105 S.Ct. 465, 83 L.Ed. 2d 450 (1984).

WEINSTEIN & BERGER, *WEINSTEIN'S EVIDENCE*, *United States Rules*, 3 Sec. 702-2 (1992).

*Id.*

WEINSTEIN & BERGER, *supra* note 1, at *United States Rules*, 3 sec. 702-1 (1992).

WEINSTEIN & BERGER, *supra* note 1, at *United States Rules*. 3 sec. 702~] (1992).

*Id.*

*Daubert v. Merrell Dow Pharmaceuticals*, 113 S. Ct. 2786, 125 L. Ed. 2d 469, 477 (1993).

25. *Mealey's Toxic Torts, Volume 2, Issue #3 (May 6.1993)*.

26.

27.

28.

*Id.*

*John Gerald Gleeson, Science in the Courtroom: Does Daubert Warrant A Change?*, *Mealey's Toxic Torts, Volume 2, Issue #3 (May 6, 1993)*.

29. *Daubert v. Merrell Dow Pharmaceuticals*, 113 S. Ct. 2786, 125 L. Ed. 2d 469, 480 (1993).

*Id.*



30. *Id.*

31. *Daubert, 113 S.Ct. at 2794 (1993).*

32. *Id.*

33. *Daubert v. Merrell Dow Pharmaceuticals, 113 S.Ct. 2728, 125 L.Ed.2d 469, 482 (1993).*

34. *Id.*

35. *Fed R. Evid. 702.*

36. *Daubert v. Merrell Dow Pharmaceuticals, 113 S.Ct. 2728, 125 LEd. 2d 469, 481 (1993).*

37. *Id at 480-481.*

38. *Id.*

39. *Id.*

40. *Daubert V. Merrell Dow Pharmaceuticals. 113 S.Ct. 2728.125 LEd. 2d 469.482 (1993).*

41. *Id.*

42. *Id.*

43. *Id. at 484.*

44. *Daubert V. Merrell Dow Pharmaceuticals. 113 S.Ct. 2728, 125 L.Ed. 2d 469, 482-485 (1993).*

45. *Id.*

46. *Id.* at 483.

47. *Id.* at 484.

48. *Daubert v. Merrell Dow Pharmaceuticals*, 113 S.Ct. 2728, 125 LEd. 2d 469.485 (1993).

49. *Id.*

50. *Mealey '5 Toxic Torts, Volume 1, Issue #23 March 4, 1993).*

51. *John Gerald Gleeson, Science in the Courtroom: Does Daubert Warrant A Change?, Mealey's Toxic Torts. Volume 2, Issue #3 (May 6, 1993).*

52. *Mealey's Toxic Torts, Volume 2, Issue #7 (July 1, 1993).*

53. *Joe G. Hollingsworth, Donald W. Fowler, and Bruce J. Berger, Defending Toxic Tort Cases Under Daubert v. Merrell Dow Pharmaceuticals, Inc., Mealey 'S Toxic Torts, Volume 2, Issue #1 (September 2, 1993).*

54. *Daubert v. Merrell Dow Pharmaceuticals. Inc.*, 43 F.3d 1311(9th Cir. 1995).

55. *See Diaz v. Johnson-Matthey, Inc.*, 893 F. Supp. 361 (D.N.J. 1995); *Wade-Greaux v. Whitehall Laboratories, Inc.*, 814 F. Supp. 1476 (D.V.I. 1995); *Paoli II*, 35 F.3d 717 (3rd Cir. 1994); *Rohrbach, et al. v. AT&T Nassau Metals*, 1994 Lexis 14457 (M.D. Pa. 1994); *Claar v. Burlington Northern R.R. Co.*, 29 F.3d 499 (9th Cir. 1994); *Trail V. Civil Engineers Corp.*, 849 F. Supp. 768 (W.D. Wash. 1995); *Casey v. Ohio Medical Products*, 877 F. Supp. 1382 (W.D. Cal. 1995); *Hopkins v. Dow Corning Corp.*, 33 F.2d 1116 (9th Cir. 1994).

**56. Those states adopting Daubert are Delaware, the District of Columbia, Iowa, Kentucky, Louisiana, Massachusetts, Montana, New Mexico, and Ohio. Oregon, and South Dakota.**

**57. Those states rejecting Daubert are California, Florida, Illinois, Kansas, Maryland and Nebraska.**

**58. Those states mentioning Daubert but as yet undecided on whether to adopt or reject it are Alaska, Arizona, Arkansas, Colorado, Connecticut, Georgia, Hawaii, Michigan, Minnesota, Missouri, New Hampshire, New York, North Dakota, Rhode Island, Texas. Washington, West Virginia. and Wisconsin.**

**59. See *People V. Leahy*, 8 Cal.4th 587,882 P.2d 321,34 Cal. Rptr.2d 663 (Cal. 1994) (deciding to reject Daubert and instead continuing to follow Kelly/Frye as the more "conservative approach"); *Olvera V. State*. 641 So.2d 120 (Fla. App. 1994) (deciding to continue to follow Frye and noting Daubert as "broadening the standard for admissibility of scientific evidence"); *People v. Kral*, 603 N.Y.S.2d 1004 (N.Y App. Div. 1993) (applying Frye but noting the liberal standards under Daubert).**

**60. *Cavallo v. Star Enterprises, et al.*, 892 F.Supp.756 (E.D. Va. 1995).**

**61. *Id.***

**62. *Id.* at 759.**

**63. *Id.***

**64. *Cavallo v. Star Enterprises, et al.*, 892 ESupp.756, 761 (E.D. Va. 1995).**

**65. *Id.***

**66. *Id.* at 770.**

**67. *Id.* at 766.**

**68. *Cavallo v. Star Enterprises. et a'*, 892 F. Supp. 756, 769-770 (E.D. Va. 1995).**

**69. *Cavallo v. Star Enterprises, et al.*, 892 F.Supp. 756, 771 (E.D. Va. 1995).**

*70. Id.*

*71. Id. at 773.*

*72. Id.*

*73. Aparicio v. Norfolk & Western Railway Co., 874 ESupp. 154 (N.D. Ohio 1994).*

*74. Id. at 155.*

*75. Id.*

*76. Id.*

*77. Aparicio V. Norfolk & Western Railway Co., 874 ESupp. 154, 159 (N.D. Ohio 1994).*

*78. Id.*

*79. Id.*

*80. Id.*

*81. Summers v. Missouri Pacific Railroad System, 897 F.Supp. 533 (E.D. Okla. 1995).*

*82. Id. at 535.*

*83. Id.*

84. *Id.*

85. *Summers v. Missouri Pacific Railroad System, 897 F.Supp. 533, 537 (E.D. Okla. 1995).*

86.

86. *Id.*

87. *Id.*

88. *Id.*

89. *Summers V. Missouri Pacific Railroad System, 997 FSupp. 533.547 (E.D. Okia. 1995).*

90. *Reynard v. NEC Corporation, 887 F.Supp. 1500 (M.D. Fla. 1995).*

91. *Id.*

92. *Id. at 1507.*

93. *Id at 1503.*

94. *Reynard V. NEC Corporation, 887 F.Supp. 1500, 1504 (M.D. Fla. 1995).*

95. *Id.*

96.

97.

98.

*Id.*

*Id. at 1505.*

*Reynard v. NEC Corporation, 887 F.Supp. 1500, 1507 (M.D. Fla. 1995), citing Daubert V. Merrell Dow Pharmaceuticals, Inc., 43 F.3d 1311 (9th Cir. 1995).*

99. *Id.*

100. *Id.*

101. *Id.*

102. *Reynard v. NBC Corporation. 887 F.Supp. 1500 (M.D. Fla. 1995).*

103. *Id.*

104. *Id.*

105. *In re Paoli Railyard PCB Litigation, 35 F3d 717, 732 (3rd Cir. 1994).*

87.

*Id.*

*Id.*

*Id.*

*Summers v. Missouri Pacific Railroad System, 997 F.Supp. 533, 547 (E.D. Okla. 1995).*

*Reynard v. NEC Corporation, 887 F.Supp. 1500 (M.D. Fla. 1995).*

*Id.*

*Id. at 1507.*

*Id at 1503.*

*Reynard v. NEC Corporation*, 887 F.Supp. 1500, 1504 (M.D. Fla. 1995).

*Id.*

*Id.*

*Id.* at 1505.

*Reynard ~ NEC Corporation*, 887 F.Supp. 1500, 1507 (M.D. Fla. 1995), citing *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 43 F.3d 1311 (9th Cir. 1995).

99. *Id.*

*Id.*

*Id.*

*Reynard v. NEC Corporation*. 887 ESupp. 1500 (M.D. Fla. 1995).

*Id.*

*Id.*

*In re Paoli Railyard PCB Litigation*, 35 F.3d 717,732 (3rd Cir. 1994).

106. *Id.*

107. *Id.*

108. *Id.*

109. *In re Paoli Railyard PCB Litigation ("Paoli\_II")*, 35 F.3d 717, 732 (3rd Cir. 1994).

*110. Paoli II, 35 F.3d 717, 733-735 (3rd Cir. 1994).*

*111. Id. at 743.*

*112. Id.*

*113. Id.*

*114. Paoli II, 35 F.3d at 743 (3rd Cir. 1994).*

*115. Id. at 744.*

*116. Id. at 746.*

*117. In re: TMI Litigation Cases Consolidated II., PICS Case No; 96-5293 (M.D. Pa. Jan. 5, 1996).*

*118. Id.*

*119.*

*120.*

*121.*

*Id.*

*Id.*

*In re: TMI Litigation Cases Consolidated II, PICS Case No: 96-5293 (M.D. Pa. Jan 5, 1996).*

*122. Fox, Ruling on TMI Exports Challenged, Pennsylvania Law Weekly, January 29, 1996 at 20.*

*123. Philadelphia Daily News, Saturday, June 8, 1996.*



124. *Id.*

125. *Daubert V. Merrell Dow Pharmaceuticals*, 113 S.Ct. 2728, 125 L.Ed.2d 469, 482 (1993).

126. *Id.*

127. *Cavallo V. Star Enterprises*, 892 F.Supp. 756, 774 (E.D. Va. 1995). *citing Rohrbough by Rohrbough v. Wyeth Lab., Inc.*, 719 F.Supp. 470 (ND. W.Va. 1989).

128. *See Cavallo V. Star Enterprises*, 893 ESupp. 756 (E.D. Va. 1995), *Reynard V. NEC Corporation*, 887 F.Supp. 1500 (M.D. Fla. 1995).

129. *Daubert v. Merrell Dow Pharmaceuticals Co.*. 113 S.Ct. 2728, 2741-2743, 125 L.Ed.2d 469, 482-485 (1993).

*Daubert V. Merrell Dow Pharmaceuticals, Inc.*, 43 F.3d 1311, 1316 (9th Cir. 1995).

130.

131.

132.

133.

*Id.*

*Id.*

*See Cavallo v. Star Enterprises*, 892 F.Supp. 756 (E.D. Va. 1995); *Summers v. Missouri Pacific R.R. System*, 897 ESupp. 533 (E.D. Okla. 1995).

134. *Cavallo v. Star Enterprises*, 892 F.Supp. 756,766 (E.D. Va. 1995).

135. *See Cavallo v. Star Enterprises*, 892 ESupp. 756, 768 (E.D. Va. 1995).

136. *See~ e.g., Reynard v. NEC Corporation*. 887 F.Supp. 1500 (M.D. Fla. 1995).

137. *Reynard V. NEC Corporation*. 887 ESupp. 1500, 1503 (M.D. Fla. 1995).

138. *id.*

139.

140.

141.

142.

*Id.*

*Id. at 1508.*

*Cavallo v. Star Enterprises. 892 F.Supp. 756.762, 769 (E.D. Va. 1995).*

*Cavallo v. Star Enterprises. 892 F.Supp. 756. 762 (E.D. V~ 1995), citing In re Paoli Railyard Litigation, 35 F.3d 717 (3rd Cir. 1994), and Developments In the Law -*

144.

145.

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147.

148.

*Confronting the New Challenges of Scientific Evidence, 108 Harv.L.Rev. 1481, 1536 (1995).*

*143. Schmaltz V. Norfolk & Western Railway Co., 878 ESupp. 1119, 1122 (N.D. Ill. 1995), quoting Conde v. Velsicol Chemical Corp., 24 F.3d 809, 814 (6th Cir. 1994).*

*Cavallo v. Star Enterprises, 892 F.Supp. 756.766 (E.D. Va. 1995).*

*In Re Paoli Railyard Litigation, 35 F.3d 717. 745 (3rd Cir. 1994).*

*Id.*

*Cavallo V. Star Enterprises. 893 F.Supp. 756,765 (E.D. Va. 1995).*

*Schmaltz v. Norfolk & Western Railway Co., 878 F.Supp. 1119, 1122 (N.D. Ill. 1995).*

*1. United States v. Tranowski, 659 F.2d 750, 757 (7th Cir. 1981).*

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