

**IT IS NOT A MATTER OF TRUST
Science Should Be Validated
Before It Is Admitted**

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EXPERT WITNESSES

A 17-year-old boy is accused of a triple homicide. He purportedly gave a written statement to police, in broken English, admitting that he possessed a knife which the State's serologist swears contains one of the victims' blood. The serologist testifies that the other weapons, an axe and knife, also contain hair and blood of the victims. A college student testifies, for the State, that he supplied the weapons, agreed to "trash a house," and drove his co-defendants to the crime scene. The police recovered the weapons from this college student's home.

However, the "blood" on the "murder weapons" is not that of the victims' at all. It is animal blood. Latent fingerprints lifted from the murder scene have been destroyed or lost and the State has secretly agreed not to even charge the college student with an offense. Worse yet, the state suppresses the fact that its expert witness likely perjured himself. In fact, the "weapons" have been tampered with and most likely have never been tested at all. This is a true story. The defendant was the youngest person on Texas' death row and my client.

Through tenacious and creative discovery techniques, aggressive litigation and negotiating from a position of strength, my client's case became the first confession of error in a capital murder case in Texas and my client is no longer on death row. What brought the state around? And more importantly, how did I know that the state's blood expert was lying?

NOT AN ISOLATED INCIDENT

A 1996 Department of Justice study reported twenty-eight persons released from prison as a result of post trial DNA testing. *Convicted by Juries, Exonerated by Science: Case Studies in the Use of DNA Evidence to Establish Innocence After Trial*, p. 2. The state's "expert witness" in four of these cases was Fred Zain. Even though Fred Zain has been discredited by the West Virginia Supreme Court, and was tried¹ on charges of theft of services based upon his routine perjurious testimony, Texas continues to fight to save convictions supported by his testimony.

¹A case which was mis-tried and has not been set for retrial to date.

My point is, that I did not know the state's expert was lying about the blood evidence in Miguel Martinez' case. I insisted that the state prove each aspect of its case was supported by the evidence. Defense lawyers cannot afford to rely upon the prosecution to reveal discovery, or count on local forensic labs to provide competent forensic testing, nor accept hair and fiber comparison, serology, RFLP, DNA, fingerprint, voice spectrography, mass gas spectrometry, and pathology, among other matters. The scientific community's interest in evolving science coupled with law enforcement's often competitive effort to ferret out crime produces endemic misconduct in crime labs and law enforcement agencies across the country. Why is this so? The Supreme Court recently offered a partial explanation.

SCIENTIFIC EVIDENCE IS PERPETUALLY REVISED CRIMINAL JUSTICE REQUIRES FINALITY

Finding that our system of justice requires integrity of evidence and finality, the Supreme Court noted that science has a different goal than that of the criminal justice system. Science seeks to test a number of hypotheses with the truth only eventually surfacing. Therefore, it held that courts must intervene as gatekeepers.

“Scientific conclusions are subject to perpetual revision. Law, on the other hand, must resolve disputes finally and quickly. The scientific project is advanced by broad and wide-ranging consideration of a multitude of hypotheses, for those that are incorrect will eventually be shown to be so, and that in itself is an advance. Conjectures that are probably wrong are of little use, however, in the project of reaching a quick, final, and binding legal judgment—often of great consequence—about a particular set of events in the past. We recognize that, in practice, a gate keeping role for the judge, no matter how flexible, inevitably on occasion will prevent the jury from learning of authentic insights and innovations. That, nevertheless, is the balance that is struck by Rules of Evidence designed not for the exhaustive search for cosmic understanding but for the particularized resolution of legal disputes.” *Daubert v. Merrill Dow Pharmaceuticals*, 509 U.S. 579, 597 (1993)[emphasis added].

Thus, the United States Supreme Court held that today's trial courts have a duty to act as gatekeepers regarding the admissibility of such evidence. The Court rejected

the predominantly applied *Frye* “general acceptance”² test for admissibility and replaced it with the relevancy test. See Rules 401 [relevancy] and 702³ [expert testimony] Federal Rules of Evidence. See also *Daubert v. Merrell Dow Pharmaceuticals*, 509 U.S. 579, 113 S.Ct. 2786, 125 L.Ed 2d 469 (1993). Thus, the Court is charged with assessing the validity of the evidence instead of relying upon what is generally accepted in the community from which the evidence originated.

As a result, the Scientific Community approached the National Academy of Sciences for help in improving science used in Courts. A great deal of data, study and analysis supports DNA evidence; there is no other area of forensic science that is validated. The NAS formed a committee of judges, statisticians, professors, lawyers, doctors, medical examiners and other experts to study the present and future resource need of the forensic science community including state and local crime lab, medical examiner and coroners. The NAS committee studied the forensic science disciplines and concluded that all areas of forensic science other than DNA lacked validation and often failed to reveal uncertainties and bias. They also, concluded that forensic science needs oversight lawyers and judges need training in that the coroner system be abolished.

²*Frye v. U.S.*, 293 F. 1013, 1014 (D.C. Cir. 1923)[emphasis added].

“Just when a scientific principle or discovery crosses the line between the experimental and demonstrable stages is difficult to define. Somewhere in the 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.”

³Rule 702 was amended after *Kumho Tire Co., Ltd. v. Carmichael*, 526 U.S. 137 (1999), to reflect the test it prescribes.

“Rule 702. Testimony of Experts

If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise, if (1) the testimony is based upon sufficient facts or data, (2) the testimony is the product of reliable principles and methods, and (3) the witness has applied the principles and methods reliably to the facts of the case.”

“The simple reality is that the interpretation of forensic evidence is not always based on scientific studies to determine its validity. This is a serious problem. Although research has been done in some disciplines, there is a notable dearth of peer-reviewed, published studies establishing the scientific bases and validity of many forensic methods.”

PRE-TRIAL HEARING REQUIRED

The trial court must determine the admissibility of such evidence, preliminarily, outside the presence of the jury. Federal Rule of Evidence 104(a) and (c) provides:

“(a) Questions of Admissibility Generally. Preliminary questions concerning the qualification of a person to be a witness, the existence of a privilege, or the admissibility of evidence shall be determined by the court....” Rule 104(a), Rule of Evidence.

“(c) Hearing of Jury. Hearings on the admissibility of confessions shall in all cases be conducted out of the hearing of the jury. Hearings on other preliminary matters shall be conducted when the interests of justice require, or when an accused is a witness and so requests.” Rule 104(c), Federal Rules of Evidence.

On remand in *Daubert*, the Ninth Circuit described the serious inquiry which trial courts deciding admissibility of expert opinion evidence must conduct.

“Federal judges ruling on the admissibility of expert scientific testimony face a far more complex and daunting task in a post-*Daubert* world than before. The judge’s task under *Frye* is relatively simple; to determine whether the method employed by the experts is generally accepted in the scientific community. Under *Daubert*, we must engage in a difficult, two-part analysis. First we must determine nothing less than whether the experts’ testimony reflects ‘scientific knowledge’, whether their findings are ‘derived by the scientific method’, and whether their work product amounts to ‘good science’.” *Daubert v. Merrell Dow Pharmaceuticals*, 43 F.3d 1311, 1315-1316 (9th Cir. 1995), *cert. denied*, 116 S.Ct. 189 (1995).

However, the NAS committee's report also found that judges were not adequately trained to make the admissibility determination. Thus has led to the unintended result that, if the judge does not understand the science, the evidence is going to come in.

COURTS' DETERMINATIONS SUBJECT TO ABUSE OF DISCRETION STANDARD OF REVIEW

The courts' decisions in this regard are reviewed under the highly deferential abuse of discretion standard. *General Electric Co. v. Joiner*, 522 U.S. 136, 118 S.Ct. 512, 139 L.Ed.2d 508 (1997)[rejecting evidence of animal studies as probative of human reactions].⁴ But inquiry is broader in its focus upon Federal Rule of Evidence 702's⁵ question concerning "assistance to the trier of fact." *Daubert v. Merrell Dow Pharmaceuticals*, 509 U.S. 579, 113 S.Ct. 2786, 125 L.Ed.2d 469 (1993). Under this rule, the evidence must be relevant, reliable⁶ and must be helpful. The Supreme Court used as an example, evidence of the phases of the moon. Such evidence is admissible to show whether it was light or dark on a particular evening. However, this same evidence was not admissible to show whether individuals were acting peculiarly on a particular evening. *Daubert v. Merrell Dow Pharmaceuticals*, 509 U.S. 579, 591-92 (1993).

Therefore, courts must exclude scientific and other expert opinion evidence, if it

⁴See *Curtis v. M & S Petroleum*, 174 F.3d 661, n. 5 (5th Cir. 1999)[court abused discretion when it excluded evidence because the facts adequately supported the witness's finding].

⁵"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."

⁶"That the Frye test was displaced by the Rules of Evidence does not mean, however, that the Rules [of evidence] themselves place no limits on the admissibility of purportedly scientific evidence. Nor is the trial judge disabled from screening such evidence. To the contrary, under the Rules the trial judge must ensure that any and all scientific testimony or evidence admitted is not only relevant, but reliable.

The primary focus of this obligation is Rule 702, which clearly contemplates some degree of regulation of the subjects and theories about which an expert may testify." *Daubert v. Merrell Dow Pharmaceuticals*, 509 U.S. 579, 125 L.Ed.2d 469, 480 (1993).

is not proven by a preponderance of the evidence, to be relevant, reliable and helpful to the jury.⁷ If evidence is beyond the ken of lay jurors, then the court is charged with determining its reliability as a guard against the admission of “junk” evidence. A timely defense challenge is necessary to give rise to the court’s gate keeping duty. *Ex Parte Diversey Corp.*, 742 So.2d 1250, 1254 (Ala. 1999)[defense did not challenge testimony, thus, it was not error for court to admit the same]; *Questar Pipeline Co. v. Grynberg*, 201 F.3d 1277 (10th Cir. 2000).

Since judges are given broad discretion under a flexible standard of admissibility litigants rely on judges to assure quality and competent evidence. But lawyers and judges lack the scientific expertise necessary to comprehend and evaluate forensic evidence in an informed manner. Trial judges must decide the admissibility of such evidence alone, without input from colleagues and little time for research and deliberation. Judicial review, thus, does not solve the problems with subjective, unreliable and invalidated science.

COURTS MUST BECOME WELL VERSED IN EACH AREA CONSIDERED

The result is that trial courts are charged with becoming sufficiently proficient regarding each area of specialized knowledge to accurately assess whether the evidence is reliable and helpful to the jury, assuring the integrity of the process. As a practical matter, however, each of you must become adept at determining the type of science or expert evidence involved in a case and obtaining sufficient assistance to challenge the evidence.

“Under *Daubert*, we must engage in a difficult, two-part analysis. First we must determine nothing less than whether the experts’ testimony reflects ‘scientific knowledge’, whether their findings are ‘derived by the scientific method’, and whether their work product amounts to ‘good science’.” *Daubert v. Merrell Dow Pharmaceuticals*, 43 F.3d 1311, 1315-1316 (9th Cir. 1995), *cert. denied*, 116 S.Ct. 189 (1995).

The Federal Judicial Center published a guide to assist federal judges in this

⁷*Daubert v. Merrell Dow Pharmaceuticals*, 509 U.S. 579, 113 S.Ct. 2786, 125 L.Ed.2d 469 (1993), held that the standard of proof is a preponderance of the evidence.

difficult task. Although judges may desire to allow lawyers try their cases unencumbered by judicial interference, the *Daubert, supra, Kumho Tire, supra* and *Joiner, supra*, cases require them to make an independent inquiry regarding any testimony requiring specialized knowledge and filter out that which is unreliable and unhelpful. But the courts will not perform their gatekeeping function unless you demand that they do so.

“With respect to the role of the trial judge, *Daubert* is quite explicit. Judges must be more active in screening expert scientific testimony, hence the notion of judges as gatekeepers. Are most judges adequate to the task? In the view of certain commentators, judges, despite ‘their general enthusiasm and diligence tend to be highly resistant to the sort of learning *Daubert* demands.’” Walsh, Judge Joseph T., *Keeping the Gate*, 83 *Judicature* 140 (November/December 1999). *See also*, J.R. Mrsookin. *Expert evidence, partisanship and epistemic competence*. 73 *BROOK L. REV.* 1009, 1033 (2008) (“[S]o long as we have our adversarial system in much its present form, we are inevitably going to be stuck with approaches to expert evidence that are imperfect, conceptually unsatisfying, and awkward. It may well be that the real lesson is this: those who believe that we might ever fully resolve—rather than imperfectly manage—the deep structural tensions surrounding both partisanship and epistemic competence that permeate the use of scientific evidence within our legal system are almost certainly destined for disappointment.”).

Utilizing the NAS committee Report will help you to gain Court’s serious attention to the fact that most forensic evidence is unreliable and should not be admitted until it is validated and the scientist performing the testing determined to be qualified and proficient on you occasion.

“The adversarial process relating to the admission and exclusion of scientific evidence is not suited to the task of finding “scientific truth.” The judicial system is encumbered by, among other things, judges and lawyers who generally lack the scientific expertise necessary to comprehend and evaluate forensic evidence in an informed manner, trial judges (sitting alone) who must decide evidentiary issues without the benefit of judicial colleagues and often with little time for extensive research and reflection, and the highly deferential nature of the appellate review afforded trial courts’ *Daubert* rulings. Given these realities, there

is a tremendous need for the forensic science community to improve. Judicial review, by itself, will not cure the infirmities of the forensic science community. The development of scientific research, training, technology, and databases associated with DNA analysis have resulted from substantial and steady federal support for both academic research and programs employing techniques for DNA analysis. Similar support must be given to all credible forensic science disciplines if they are to achieve the degrees of reliability needed to serve the goals of justice. With more and better educational programs, accredited laboratories, certified forensic practitioners, sound operational principles and procedures, and serious research to establish the limits and measures of performance in each discipline, forensic science experts will be better able to analyze evidence and coherently report their findings in the courts. **The current situation, however, is seriously wanting, both because of the limitations of the judicial system and because of the many problems faced by the forensic science community.** Strengthening Forensic science In the United States: A Path Forward.

GATE KEEPING ROLE ALSO APPLIES TO NON-NOVEL SCIENCE AND OTHER OPINION EVIDENCE

The United States Supreme Court held in *Daubert* that Rule 702 of the Federal Rules of Evidence applies to all expert testimony, not only that which is novel.

"Although the Frye decision itself focused exclusively on 'novel' scientific techniques, we do not read the requirements of Rule 702 to apply specially or exclusively to unconventional evidence." *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579, 125 L.Ed.2d 469, 482 n. 11 (1993).

The Supreme Court further explained in *Kumho Tire Company v. Carmichael*, 119 S.Ct. 1167, 1171 (1999), that the trial court's gate keeping function announced in *Daubert*⁸ applies to testimony based upon "technical" and "other specialized" knowledge in addition to scientific testimony. *Kumho Tire, supra*, is a products liability case that concerns opinion testimony regarding tire defects. Although some

⁸*Daubert v. Merrell Dow Pharmaceuticals*, 509 U.S. 579 (1993).

jurisdictions reject *Kumho Tire Co., Ltd. v. Carmichael*, 526 U.S. 137 (1999), most now subject all opinion evidence to *Daubert's* analysis.⁹

The key objective is that all expert and lay opinion testimony must be subjected to the same rigorous, pre admission, consideration. “Expert” and lay opinion testimony has the most significant impact in criminal cases because it is characterized as objectives dispassionate and more informed than that of fact witnesses and the litigants. It is characterized as unbiased.

However, this is far from the case. The facts are that such testimony is often informed by police reports, is biased by the police theory, is influenced by subjective analysis, is not based in validated science and its flaws or shortcomings are not revealed or admitted by the witness of cross examination. This is true because the culture in the forensic science community has been one of “trust.” The prosecution and Courts are expected to take on faith that the opinion of the lab scientist is correct. How often have you heard a Court respond to your request for expert witness funds to test the same evidence that the prosecution was tested with “that evidence has already been tested. I am not going to pay to have it tested again?” So, because of this culture of “trust,” we are often coerced into accepting unverified forensic science at face value.

The National Association of Criminal Defense Lawyers distinguished our role from that of the prosecution and took a stand regarding the subjective forensic science that has yet to be validated in its report attached to this paper. No such evidence should be admitted in evidence against the accused until it is validated. If, over objection, it is admitted, all of its flaws should also be introduced and explained to the jury.

“The United States Supreme Court cautioned a generation ago the “[e]xpert evidence can be both powerful and quite misleading because of the difficulty in evaluating it”. [*Daubert v. Merrell Dow*

⁹Arizona, Wisconsin and Minnesota have rejected *Kumho Tire Co., Ltd. v. Carmichael*, 526 U.S. 137 (1999); *Logerquist v. McVey*, 1P3d 113 (Az. 2000); *State ex rel. Romley v. Fields*, 201 Ariz. 321, 35 P.3d 82 (Ariz. App. Div. 2001)[superceded by rule, continuing to rely on general acceptance test]; *Morgan v. Krenke*, 72 F. Supp.2d 980 (E.D. Wis 1999) reversed on other grounds, 232 F.3d 562 (7th Cir. 2000); *Goeb v. Tharaldson*, 615 N.W.2d 800 (Minn. 2000).

Pharmaceuticals, 509 U.S. 579, 595 (1993)]

The recognition of deficiencies with forensic evidence, was only grown since then. *See Melendez-Diaz v. Massachusetts* [Serious deficiencies have been found in the forensic evidence used in criminal trials...] U.S. ___, ___, 129 S.Ct. 2527, 2537 (2009)

“[T]he legal community now concedes, with varying degrees of ungebey, that our system produces erroneous convictions based on discredited forensics!] Nonetheless, the prevalence of forensic evidence in criminal cases has grown over time. In this era of increasing reliance on forensic evidence, defense lawyers, more than ever, need to have the ability to understand such evidence to effectively represent the accused and to ensure that every defendant is afforded due process of law. When it is the defense counsel who considers the affirmative use of forensic evidence—whether to provide reasons for the jury to doubt the prosecution’s charges or even to fully exonerate the defendant—defense lawyers, consistent with their sixth Amendment and ethical obligations, need independent access to scientific and forensic experts and evidence to prepare and present the defense. In the more frequent instances in which it is the prosecution that seeks to use forensic evidence to carry its burden to prove beyond a reasonable doubt that a criminal defendant committed a crime, defense counsel is constitutionally and ethically obligated to ensure that the evidence is sufficiently accurate and reliable to be presented to a jury and that, if it is so presented, that the jury understands the limits of the evidence.” *Principles and Recommendations to Strengthen Forensic Evidence and Its Presentation in Other Courtrooms*, p.2 (NACDL February 27, 2010)¹⁰

“Not all forensic disciplines are equally grounded in validated science. Nor are all forensic processes within a particular discipline equally grounded in validated science. The results of any forensic theory or technique whose validity, limitations, and measures of uncertainty have not been established should not be admitted into evidence to prove the guilt of an accused person¹¹. Prior admissibility or use of the results of a

¹⁰ [http://www.nacdl.org/sl_docs.nsf/issues/crimelab_resources/\\$file/nacdlstrengtheningforensicaustin.pdf](http://www.nacdl.org/sl_docs.nsf/issues/crimelab_resources/$file/nacdlstrengtheningforensicaustin.pdf)

¹¹ See generally *In re Winship*, 397 U.S. 358, 362 (1970) (referring to presumption of innocence as “that bedrock ‘axiomatic and elementary’ principle whose ‘enforcement lies at the foundation of the administration of our criminal law’” (quoting *Coffin v. United States*, 156 U.S. 432, 453 (1895))). While the prosecution presents at trial the vast

forensic discipline, techniques, or theory is not conclusive proof of validity or reliability.¹² Principles and Recommendations to Strengthen Forensic Evidence and Its Presentation in Other Courtroom, p.8 (NACDL February 27, 2010)

For too long prosecution “experts”, merely voicing their subjective and absolute views, testified by essentially saying, “believe me, he’s guilty.” In innumerable areas, they have passed off non-validated conclusions as science. No, it has not been established that every person’s fingerprints are unique. No, it is not true that hairs can be accurately compared microscopically. The use of mitochondrial DNA established that such comparisons were demonstrably wrong 50% of the time.

The reply of prosecutors, who attempt to get courts to accept such mediocrity as a substitute for proof beyond a reasonable doubt, is such evidence for decades. However, the courtroom is clearly a poor substitute for rigorous science. The poor

majority of forensic evidence, defense counsel sometimes uses forensic evidence affirmatively in their representation of accused persons. Defense attorneys should seek to use validated science- and should seek to avoid using science that has been demonstrated to be invalid- in their representation. Ultimately, a defense counsel’s use of forensic evidence in the case-in-chief is guided by all defendants’ constitutional right to present evidence in their behalf and by all defense attorneys’ obligations to zealously represent their clients and to provide constitutionally effective assistance of counsel. *See generally Chambers v. Mississippi*, 410 U.S. 284, 302 (1973) (“Few rights are more fundamental than that of an accused to present witnesses in his own defense...[W]here constitutional rights directly affecting the ascertainment of guilt are implicated, the hearsay rule may not be applied mechanistically to defeat the ends of justice.”); *Washington v. Texas*, 388 U.S. 14, 19 (1967) (“The right to offer the testimony of witnesses, and to compel their attendance, if necessary, is in plain terms the right to present a defense, the right to present the defendant’s version of the facts as well as the prosecution’s to the jury so it may decide where the truth lies.”); *Patrick v. State*, 750 S.W.2d 391, 391 (Ark.1988)(“The legal question in this case is whether the results of a portable breath test, or what is sometimes called a roadside sobriety test, which are not admissible to prove a person is guilty of driving while intoxicated, are admissible when they would indicate a person is not guilty. In this case the answer is yes because the evidence is exculpatory, was crucial to the defense, and sufficiently reliable to warrant admission.”).

¹² See, e.g., *United States v. Green*, 405 F.Supp.2d 104, 109 (D. Mass. 2005) (“The more courts admit this type of tool mark evidence without requiring documentation, proficiency testing, or evidence of reliability, the more sloppy practices will endure; we should require more.”) Courts have historically exhibited extreme reluctance to deny the prosecution the use of forensic evidence at trial. See *Criminal Justice: And Some Suggestions for Reform*, 95 *American J. Public Health* S107, S109 (2005), and Paul C. Giannelli, *Wrongful Convictions and Forensic Science: The Need to Regulate Crime Labs*, 86 *N.C.L. Rev.* 163 (2007)). The NAS Report, since its publication in February 2009, has become part of a change in the legal landscape in which the need for demonstration of the scientific validity and limitations of forensic theories and techniques can no longer be doubted, and therefore invalidated forensic evidence should not be admitted against a defendant in court. Despite this proscription against admission by the prosecution of invalidated forensic evidence, some courts may nonetheless improperly admit such evidence prior to completion of the necessary studies to determine their validity and limits. Such circumstances should not occur; however, if they do, at a minimum, jurors must be instructed about the lack of demonstrated validity, the limitations of the opinion offered, and the existence and degree of various error rates associated with the method or technique; and the defense must be permitted to present evidence consistent those instructions.

state of forensic science chronicled in the NAS Committee Report is a testament to this fact.

FOURTH CIRCUIT HAS NOT RESOLVED WHETHER *DAUBERT* APPLIES TO EVIDENCE OFFERED AT SENTENCING PHASE

In a tragic case defense counsel failed to adequately seek to exclude questionable evidence. In *U.S. v. Barnette*, 211 F.3d 803, 815 (4th Cir. 2000), the Fourth Circuit found a doctor's testimony concerning a "Psychopathy Checklist" met the requisites for admissibility under *Daubert* but noted the Government contended that *Daubert* does not apply to the sentencing phase of a death penalty case. The Government also places the burden of proof on the defendant to show the evidence was inadmissible because he had only challenged the evidence via a motion in limine. The Fourth Circuit reversed the death penalty, however, because the trial Court excluded a defense expert. On remand, the new penalty phase produced a death penalty and the fourth Circuit affirmed *U.S. v. Barnette*, 390 f.3d 775(4th Cir. 2004).

THE *DAUBERT* NONEXCLUSIVE FACTORS

Daubert sets out nonexclusive factors which trial courts should consider to determine "whether the expert is proposing to testify to scientific knowledge that will assist the trier of fact to understand or determine a fact in issue." Thus, the court must assess "whether the reasoning or methodology properly can be applied to the facts in issue" by asking "whether it can be (and has been tested . . .)," ... "whether the theory or technique has been subjected to peer review and publication" and the "court ordinarily should consider the known or potential rate or error." "...Finally, 'general acceptance' can yet have a bearing on the inquiry." *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 125 L.Ed. 2d 469, 482-484 (1993).

The factors outlined are not exclusive and may be employed by a trial court deciding the admissibility of opinion testimony regarding technical or other specialized matter.

"The test of reliability is 'flexible' and *Daubert's* list of specific factors neither necessarily nor exclusively applies to all experts or in every case. Rather, the law grants a district court the same broad latitude when it decides how to determine reliability as it enjoys in respect to its ultimate reliability determination. See *General Electric Co. v. Joiner*, 552 U.S.

136, 143, 118 S.Ct. 512, 139 L.Ed.2d 508 (1997) . . . at the same time . . .
. Some of *Daubert's* questions can help to evaluate the reliability even of
experience-based testimony." *Kumho Tire Company v. Carmichael*, 119
S.Ct. 1167, 1171, 1176 (1999).

See also U.S. v. Hankey, 203 F.3d 1160, 1167 (9th Cir. 2000)[officer with gang
experiences could testify about code of silence and retaliation without meeting
Daubert factors]. But three Supreme Court Justices suggested in *Kumho Tire* that the
failure to apply "one or another" of the *Daubert* factors could be unreasonable and,
thus, constitute an abuse of discretion, allowing for reversal of the trial court's
determination upon appeal. Therefore, expert opinion testimony concerning such non-
scientific matters such as future dangerousness¹³ are subject to the same scrutiny under
Daubert as scientific evidence.

EXPERT TESTIMONY IS ALSO SUBJECT TO ANALYSIS UNDER RULE 403

After determining if the proffered expert testimony is reliable and, thus,
probative and relevant, the trial court must then determine whether, on balance, that
testimony might nevertheless be unhelpful to the trier of fact for other reasons. Even
reliable and relevant expert testimony might prove unhelpful if it is cumulative or
would confuse or mislead the jury, or would consume an inordinate amount of trial
time. Most importantly, the testimony must constitute "knowledge"; not "subjective
belief or unsupported speculation." *Daubert v. Merrell Dow Pharmaceuticals, Inc.*,

¹³In the two states that lead the nation in executions--Texas and Virginia--the law asks juries
to decide if a defendant is likely to be "a continuing threat to society." Prosecutors frequently use
psychiatric experts to offer their opinions on that question. Particularly in Texas, the psychiatrists
almost never actually examine the defendants, but virtually always predict with a strong degree of
certainty--sometimes 100% certainty--that the defendant will commit a violent act in the future.
Testimony of that sort has been used in cases of more than 100 people on death row in Texas alone,
according to a recent study. Such predictions are widely discounted among scientists and would
almost certainly never be allowed in a civil suit--a case over a defective product, for example--legal
experts on both sides of the death penalty debate say. Exams Called 'Hindrance'. Several studies
have suggested that attempts to predict a person's dangerousness are wrong more often than right.
And the American Psychiatric Assn. for many years has taken the position that "medical knowledge
has simply not advanced to the point where long-term predictions . . . may be made with even
reasonable accuracy."

509 U.S. 579 (1993). Thus, if the court determines that the expert evidence is reliable and relevant, it still must decide whether the probative value of the testimony is outweighed by one or more of the factors identified in Rule 403.

This second step is that contained in Rules 402 and 403 of the Rules of Evidence and is incorporated in Rule 702. The Rule expressly limits opinion testimony. The testimony must be about “technical,” “scientific” or “specialized” matter. It must “assist” the trier of fact to “understand the evidence” or “determine a fact in issue.”

" 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." Federal Rule of Evidence, Rule 702, in pertinent part.

PRETRIAL DISCLOSURE

The federal discovery rule expressly provides for pretrial disclosure, upon request, of experts' opinions, their basis and the witnesses' qualifications. Rule 16(1)(G) of the Federal Rules of Criminal Procedure provides:

“(G) Expert Witnesses. At the defendant's request, the government must give to the defendant a written summary of any testimony that the government intends to use under Rules 702, 703, or 705 of the Federal Rules of Evidence during its case-in-chief at trial. If the government requests discovery under subdivision (b) (1)(3)(ii) and the defendant complies, the government must, as the defendant's request, give to the defendant a written summary of testimony that the government intends to use under Rules 702, 703, or 705 of the Federal Rules of Evidence as evidence at trial on the issue of the defendant's mental condition. The summary provided under this paragraph must describe the witnesses' opinions, the base and the reasons for those opinions, and the witnesses' qualifications.” Rule 16(1)(G), Federal Rules of Criminal Procedure.

Additional rules, case law, subpoena power and the public information act may render specific items discoverable as a matter of law. Therefore, counsel should enlist

formal and informal means to discover information necessary to defend against scientific or other expert opinion based evidence. For example, in many jurisdictions autopsy reports are public documents which may be obtained directly from the medical examiner.

“Records

Sec. 11. The medical examiner shall keep full and complete records properly indexed, giving the name if known of every person whose death is investigated, the place where the body was found, the date, the cause and manner of death, and shall issue a death certificate. The full report and detailed findings of the autopsy, if any, shall be a part of the record. Copies of all records shall promptly be delivered to the proper district, county, or criminal district attorney in any case where further investigation is advisable. The records are subject to required public disclosure in accordance with Chapter 552, Government Code, except that a photograph or x-ray of a body taken during an autopsy is excepted from required public disclosure in accordance with Chapter 552, Government Code, but is subject to disclosure:

- (1) under a subpoena or authority of other law; or
- (2) if the photograph or x-ray is of the body of a person who died while in the custody of law enforcement.” Texas Rules of Criminal Procedure, Article 49.25.

Also, case law establishes that the defendant is entitled to production and independent testing of evidence that is material to the defense or the prosecution’s case. *U.S. v. Noel*, 708 F. Supp. 177 (W.D. Tenn. 1989)[drugs]; *U.S. v. Taylor*, 25 F.R.P. 225, 227 (E.D.N.Y. 1960)[analysis of drugs]; *U.S. v. Dean*, 59 F.3d 1479 (5th Cir. 1995)[crack]; *Detmering v. State*, 481 S.W.2d 863 (Tex.Cr.App. 1972)[analysis of drugs]; *Terrell v. State*, 521 S.W.2d 618 (Tex.Cr.App. 1975)[analysis of alleged marijuana]; *Wills v. State*, 501 S.W.2d 925 (Tex.Cr.App. 1973)[fingerprints]; *Ball v. State*, 631 S.W.2d 809 (App. 11 Dist. 1982 review refused)[photographs]; *U.S. v. Streich*, 759 F.2d 579 (7th Cir.)[firearm], *cert. denied*, 474 U.S. 860 (1985); *Sims v. Livesay*, 970 F.2d 1575 (6th Cir. 1992)[gun and quilt]; *Quinones v. State*, 592 S.W.2d 933, 940 (Tex.Crim.App.), *cert. denied*, 449 U.S. 893, 101 S.Ct. 256, 66 L.Ed.2d 121 (1980)[tape recordings]; *Whitechurch v. State*, 650 S.W.2d 422 (Tex. Cr.App. 1983)[medical records]; *Madsen v. Dormire*, 137 F.3d 602 (8th Cir. 1998)[serology]. The Defendant is also entitled to evidence in the sole possession of the prosecution

that is material to the defense.

A defendant is also constitutionally entitled to evidence which impeaches the state's case or is otherwise favorable to the defendant. *See Brady v. Maryland*, 373 U.S. 83, 83 S.Ct. 1194, 10 L.Ed.2d 215 (1973). The determination whether some evidence is favorable or impeaching is examined cumulatively and not on an item by item basis. Such evidence must be produced by the prosecution whether or not he or she is in possession of it, whether or not the prosecution is aware of it and whether or not it is requested by the defense. The test for production is not a materiality test. Certainly, prosecution is in no position to determine what is or is not material to the defense. *See Kyles v. Whitley*, 514 U.S. 419, 131 L.Ed.2d 490, 115 S.Ct. 1555 (1995). *Brady* evidence is favorable evidence. A good test is, if the prosecutor would hate to tell you about it, it is *Brady* evidence.

In *Kyles v. Whitley*, 115 S.Ct. 1555 (1995) the Supreme Court found that the following Minor items, considered cumulatively, constituted *Brady* evidence which should have been produced to the defense. The police uncritically accepted the informant's version of events even though it contained inconsistencies. The lead detective was either less than candid or less than fully informed. The informant's behavior raised suspicions that he may have planted evidence where it was found. Only one out of four eye witnesses gave a description of the perpetrator that did not match the defendant, but did match the informant. And one eyewitness was coached to state that he observed more than he had.

Thus, any favorable or impeaching evidence regarding forensic science should be provided to the defense regardless of whether the prosecution estimates it is material. "When I am describing *Brady* evidence, I like to tell the story about a phone call I received from a wonderfully professional prosecutor in San Antonio, I got a call from Assistant U.S. Attorney Charlie Strauss. He said, "Cynthia, I hate to tell you this." And then he went on to tell me about some favorable evidence he had just learned. If the prosecutor "hates to tell you something," then it is *Brady* evidence.

The Deputy Attorney General, saved W. Ogden, recently release three memoranda seeking to create a culture of disclosure in the federal system. On January 4, 2010 the DOJ released memos Guiding Prosecutors to establish a methodical approach to the consideration of discovery obligations that will avoid lapses, providing a discovery coordinator, providing training to U.S. Attorney's and law enforcement and requiring local U.S. Attorney's offices to develop discovery policies

by year 2010.

At least three additional reasons suggest that a trial court should order pretrial disclosure of expert witness testimony. 1) Expert witnesses are not likely to be swayed from their positions by pretrial disclosure. 2) The trial court must decide admissibility of expert opinion testimony before it is admitted to a jury. 3) Early distillation of the issues upon which expert opinions will have a bearing will promote the orderly conduct of trial.

In fact because Courts may be unnecessarily inconvenienced by lengthy *Daubert* hearings, counsel should suggest liberal use of criminal depositions to assist the courts in performing their gate keeping functions before trial. *See U.S. v. Katz*, 178 F.3d 368 (5th Cir. 1999). *See* Article 30.02, Texas Code of Criminal Procedure. This should constitute a “good reason” or an exceptional circumstance for the court to order the deposition of expert witnesses. *See* 18 U.S.C. §3503 and Rule 15(a) Federal Rules of Criminal Procedure. During such a deposition one may ask questions about any non-privileged matter relevant to the case. Article 39.04, Texas Code of Criminal Procedure.

“Depositions of witnesses may be taken by the defendant. When the defendant desires to take the deposition of a witness, he shall, by himself or counsel, file with the clerk of the court in which the case is pending an affidavit stating the facts necessary to constitute a good reason for taking the same, and an application to take the same. Provided that upon the filing of such application, and after notice to the attorney for the state, the courts shall hear the application and determine if good reason exists for taking the deposition. Such determination shall be based on the facts made known at the hearing and the court, in its judgment, shall grant or deny the application on such facts.” Article 39.02, Texas Code of Criminal Procedure.

When counsel cannot obtain information through formal means, a letter writing campaign and inquisitive telephone calls may net the information. What can you do to spot bad science? Use common sense, do your homework, make friends in the scientific community, use the internet and computer based research tools and rely upon each other.

RULES OF THE ROAD

How can the criminal defense lawyer, untrained in science and other specialized fields, discover if fraudulent or false information is being used in her case?

- Be a letter writer
- Have earnest telephone calls requesting explanations
- Go get the file, look in it and ask for more
- Get the communications between the prosecutors and the expert
- Subpoena the mundane (requisition records from the county auditor)
- Ask for notice of opinion evidence
- Take depositions of experts
- Get a hearing on your discovery motion
- Use open and required records law

Rule #1: Assume that the scientific or expert testimony is suspect.

Rule #2: Scientific Analysis should be objective. How to rate objectivity:

- ✓ Will the lab allow you to visit, review its file and interview its scientists;
- ✓ Does the file contain a police report with its version of events?
- ✓ Will the lab allow your expert to observe testing, or must you first obtain a court order?
- ✓ Does the evidence submission form list what the prosecution expects the evidence will show and/or ethnicity of the suspect?

Rule #3: Check it out -

- Computer searches
- Networking
- Defense Expert

Rule #4: Review the lab's entire file including the raw material.

Rule #5: If they cannot produce the file, it is reasonable to presume it does not exist.

Corollaries to Rule #5:

- ✓ Make certain that there is a result for every sample and a sample for every result
- ✓ Did lab leave footprints of its testing (e.g. holes in cloth tested for blood)?

Rule #6: Check for time travel

Rule #7: Can you get there from here? or Ouija Board versus Instrumentation

Rule #8: Take notice of scientific arrogance, easy for the layman to spot. Nothing is absolute

Corollaries to Rule #8:

Mistakes, sloppiness, exaggeration and biased testimony sound just as good as the real thing

Rule #9: Are we playing hide and seek?

TOP TEN WAYS TO TELL THE EXPERT IS LYING

- the testimony is better than the report
- the witness makes an absolute statement
- the file contains a police/prosecutor wish list
- overlooked evidence has recently surfaced
- no portion of the sample remains for subsequent testing
- the report and testing logs suggest time travel took place
- the samples appear to be from another case
- the samples do not appear to have been tested
- the lab does not have the equipment/chemicals to perform the test
- there are more samples than results

IF THE COURTS ARE THE GATEKEEPERS, YOU ARE THE KEY MASTER

Or it does not take a rocket scientist to spot lab fraud

- Review the lab's entire file.
- Check the labels and expiration dates.
- Check who really did the work and what are their credentials? Pay no attention to the man behind the green curtain.
- Do you have a result for every sample and a sample for every result?
- One of these items does not belong here, one of these items is not the same (slide show different case number)
- What it means when there is no sample left .
- Does the sample have integrity? (e.g. does blood at the scene have preservative in it?)
- Review the lab's entire file.
- Do you detect the Dudley Dooright approach to forensic science? I always get my man. I know it when I see it. -Or- May I take your order please? Is the lab in possession of the law enforcement or prosecution theory of the case?

- Spectral evidence. You can't get there from here or Ouija board versus instrumentation. Does the lab have the equipment, materials and expertise to preform the testing reported?
- Does the lab practice proper quality control or are samples contaminated? You cannot work at Kentucky Fried Chicken, but you can work at the DNA, hair and fiber lab. The Oscar Madison syndrome. The Pig Pen approach to forensic science.
- The fungible sample syndrome. Make sure its your sample that is actually being tested.
- Should I snort it or test it? Make sure that no monkey business is going on at the lab or with the technicians.
- A rose by any other name does not pass the smell test.

**ONE BAD APPLE SPOILS THE WHOLE BARREL
OR
WHEN ONE SCIENTIST CUTS CORNERS,
THE REST MAY FOLLOW SUIT**

Bad science or expert opinion evidence may convince law enforcement that they have it right, when this is unwarranted. The result is potential witness coercion and other corner cutting measures that infect the entire investigative and trial process.

DISCOVERY TECHNIQUES

What we know to be law enforcement and prosecution lack of commitment to their duties to promote justice have manifested in the revelation that 3,000 documents were withheld by the FBI from Timothy McVeigh's lawyers, that the FBI withheld evidence that would have exonerated Joseph Salvati who spent 30 years in prison for murder before being freed, that it developed a reputation for withholding information in the Wen Ho Lee case, and that it engaged in misconduct by covering up the use of certain tear gas rounds in the Branch Davidian Compound debacle . Conservative figures have been shaken by this cavalier attitude toward justice. Senator Charles Grassley stated that "we've had a lot of cases where documents just seemed to appear and when that happens so often, I'd have to say, I don't believe it." And, Senator Arlin Specter calling for congressional oversight of the FBI said, "If the documents intentionally were withheld from the [McVey] defense team, severe measures are called for. There ought to be a criminal prosecution for obstruction of justice, and we

really ought to be tough if we can prove that this evidence was withheld deliberately.”

There have been no lack of examples in recent high-profile cases. In the Ted Stevens case, tried by the Department of Justice Public Integrity Section, the DOJ abandoned the conviction because favorable evidence was withheld by the prosecution. Then there is the W.R. Grace case in which defense lawyers contended that Brady evidence was withheld and that there was an improper relationship between a government witness and the government. And who can forget the duke lacrosse case? The Prosecutor withheld favorable evidence establishing that the three Duke players accused of rap were innocent.

**FORENSIC SCIENCE DISCIPLINES
WHICH HAVE YET TO ESTABLISH THE VALIDITY
OF THE SCIENCE OR ACCURACY OF OPINIONS**

FINGERPRINT COMPARISON

Finger print examiners will compare a latent print to a known print and declare a “match” in their testimony.

We know from the Madrid bombing, in which three FBI fingerprint examiners made the same mistake, two things about fingerprint comparisons. The examination is subjective and, thus, the examiner is influenced by law enforcement bias or theory of the case. And that the fingerprints are not matched. They are compared to determine whether the latent can be excluded. In the Madrid case, the prints had points of comparison, but also points that excluded the latents as a match to the Muslim lawyer from Oregon. And we now know that no testing has established that everyone's fingerprints are unique. Just as with DNA testing, an analysis of the probabilities that another person may share the same fingerprint characteristics, needs to be done to validate the scientific premise. No longer should counsel allow a witness to offer this presumption, since no proof backs it up. The question one should ask is whether there is enough detail in the latent print to declare a match to the exclusion of all others? Can the details that do not match be explained? About the ACE-V method of fingerprint comparison, the NAS Committee report provides at page 142:

“Ace-V “is not specific enough to qualify as a validated method for this type of analysis. ACE-V does not guard against bias; is too broad to

ensure repeatability and transparency; does not guarantee that two analysts following it will obtain the same results...merely following the steps of ACE-V does not imply one is proceeding in a scientific manner or producing reliable results.” p.142

FIREARMS TOOL MARKS EXAMINATION

The theory is that different weapons' inner-works are fashioned by tools that leave a distinct pattern inside the barrel of each weapon. Also, upon firing, each weapon leaves these distinct marks on the ammunition used in the firing. However studies do not support that the tool marks left by different tools are all that unique. Page 155 of the NAS Committee report provides about tool mark examination:

“Although some studies have been performed on the degree of similarity that can be found between marks made by an individual tool, the scientific knowledge base for toolmark and firearms analysis is fairly limited.” p. 155

MICROSCOPIC HAIR COMPARISON

In Texas, hair comparison led to the imposition of the death penalty on Michael Blair, who through later DNA testing was shown to be innocent of the crime. Defense lawyers need to know that microscopic hair comparison has been found to be demonstrably wrong through Mitochondria DNA testing over 50% of the time. In addition, there are no accepted statistics regarding the frequency of distribution of any particular hair characteristics and no uniform standards for the number of features that appear in hairs compared before an examiner may declare a match. Thus, microscopic hair comparisons are without value and should not be admitted in evidence. Page 161 of the NAS Committee report states:

“The committee found no scientific support for the use of hair comparison for individualization in the absence of nuclear DNA. Microscopy and MtDNA analysis can be used in tandem and add to one another's value for classifying a common source, but no studies have been performed to specifically quantify the reliability of their joint use.”
p 161

QUESTIONED DOCUMENTS

While there may be some value in handwriting comparisons, the NAS Committee found that their scientific basis needed strengthening:

“The scientific basis for handwriting comparisons needs to be strengthened... Although there has been only limited research to quantify the reliability and replicability of the practices used by trained document examiners, the committee agrees that there may be some value in handwriting analysis.” the NAS Committee report provides at page 167.

ARSON AND EXPLOSIONS

For too long local firemen and law enforcement have relied on wives' tales to conclude that fires have been set by arson. Texas Monthly, a statewide magazine devoted mostly to entertainment and politics recently wrote an article about poor forensic science entitled *Weird Science*, Michael Hall (May 2010 Issue)[<http://www.texasmonthly.com/preview/2010-05-01/feature2>]. The article notes that:

"Testimony from forensic experts can be the most persuasive evidence presented at trial, but often juries don't realize that the analysis of hair, fire, and even fingerprints may not be so scientific. And as the story of deputy Keith Pikett, master of the dog-scent lineup, shows, investigations can sometimes lead to the greatest crime of all: putting innocent people behind bars."

I commend the article to you not only for its spot on exposure of bad forensic science used in courts, but also for its simplified layman's explanation of why and how the science is flawed. Use the article to help you articulate to judges, prosecutors and juries the fundamental wrongness of much that passes for science. It also covers the Todd Willingham case, a case where a man was wrongly executed in Texas by the use of old wives' tales in an arson investigation.

"Willingham had been convicted of murdering his three children by setting fire to his family's Corsicana home in 1991, and he had been

executed in 2004. The guilty verdict came primarily because of the testimony of two longtime arson investigators—an assistant fire chief and a deputy fire marshal—neither of whom had much education in the actual science of fire. The two men sleuthed their way through the burned-out structure, and though they found no indisputable physical evidence of arson in the house—no gas can, no kerosene, no matches—they did find, on the floor of the children’s bedroom, strange marks that they identified as 'pour patterns,' which indicated that an accelerant had been used. They also found 'crazed glass,' pieces of broken window suffused with spiderweb cracks, which suggested that an accelerant had been used, causing the fire to burn superfast and superhot. And they found charring under a threshold plate; common sense indicated that an accelerant had been poured there too. By the time their tour was complete, they believed the fire had been intentionally set.

Willingham protested his innocence until his execution. Afterward, others began protesting too, including seven contemporary arson scientists and investigators, some of whom had done actual science experiments and analytical chemistry on fires and all of whom were stunned at the lack of hard science used to determine that the fire was arson. Each of the seven reached the conclusion that every indicator of arson the two original investigators had found was invalid. 'The investigators had poor understandings of fire science and failed to acknowledge or apply the contemporaneous understanding of the limitations of fire indicators,' wrote Craig Beyler, a nationally recognized fire scientist, in an August 2009 report to the state’s new Forensic Science Commission, a panel founded by the Legislature to investigate faulty or negligent forensic science. 'Their methodologies did not comport with the scientific method or the process of elimination. A finding of arson could not be sustained.'" Texas Monthly, Weird Science, Michael Hall (March 2010 Issue).

The NAS Committee report acknowledges the problem is widespread. At page 173 it states:

“The scientific foundations exist to support the analysis of explosions, because such analysis is based primarily on well-established chemistry...By contrast much more research is needed on the natural variability of burn patterns and damage characteristics and how they are

affected by presence of various accelerants. Despite the paucity of research, some arson investigators continue to make determinations about whether or not a particular fire was set...Experiments should be designed to put arson investigation on a more solid scientific footing.” p. 173

BLOODSTAIN PATTERNS

Bloodstain pattern analysis has value as long as care is taken to conduct experiments under identical circumstances to determine the results on bloodstain patterns of any certain action. Because the same pattern can result from any number of actions and variables, extreme care should be taken with such evidence. During a recent training put on by the NACDL, the Innocence Project and DOJ, I observed a slow motion film of a close range gunshot. The cloud of gases emanating from the gun caused a blowback of blood vapor and spray that left one with the wrong impression about what had occurred if you did not see the experiment. Neither the position of the gun or the gases from the gun fire are visible factors at the scene. In order to be aware of all the variables in bloodstain pattern analysis, there is not substitute for reconstruction of the actions in a carefully crafted experiment. The NAS Committee report states about bloodstain pattern analysis at page 179:

“Scientific studies support some aspects of blood pattern analysis,” However, “many experiments must be conducted to determine what characteristics of bloodstain pattern are caused by particular actions during a crime and to inform the interpretation of those causal links and their variabilities.” P. 179

“Extra care must be given to the way in which the analyses are presented in court. The uncertainties associated with bloodstain pattern analysis are enormous.” P. 179

CONTROLLED SUBSTANCES

While mass gas spectrometry is a sound basis to analyze chemical content of a controlled substance, sources of error and the quality of the result are not typically revealed in the opinion testimony relaying the results. A good example is an intoxicated manslaughter case I handled on the motion for new trial and appeal. The decedent was stopped partially in the dark roadway at 3 a.m. in a perfectly functional car. She had 7 crack pipes in her purse and her eyes were already rolled back in her

head immediately after the accident with my client. An EMIT test of her blood taken a few days later showed cocaine and methamphetamine. A mass gas chromatography ("GC") test produced by the Department of Public Safety was said to be "negative" and "without a trace of analytes."

It turns out that the blood sample did not contain the proper preservative, the test was not done for a year, cocaine degrades substantially over time, and there was sufficient trace of cocaine analytes to establish that the decedent had cocaine on board at the time of the accident. Coupled with the medical testimony and her parking partway in the road way with a fully functional car proved that she probably died of a heart attack caused by a drug overdose before the traffic accident.

In a case out of Dallas, Texas, the lab tech was using the same GC test result strip over and over again in every case. It turns out that she was using the cocaine. Another, but not recommended, way to test for cocaine. In yet another, GC case out of New Mexico, the results reported only a 47% certainty that the substance was as suspected. This is not good enough proof to meet the beyond a reasonable doubt standard. The NAS Committee Reports warns about getting enough information to determine whether the test results are erroneous, misleading or obscured. At page 135 it states:

“While the “chemical foundations for the analysis of controlled substance are scientifically sound,” “possible sources of error are not commonly included” and the “style of reporting is often inadequate because it may not provide enough detail to enable peer review or other courtroom participants...question the sampling scheme, processes of analysis, or interpretation.” P. 135

FORENSIC ODONTOLOGY

Applying dentistry to criminal law may work when one is attempting to identify remains. But bite mark comparison is of questionable value. It is one thing to collect DNA from swabs of the skin to identify the biter. But using photography or overlays to identify a bite mark pattern is controversial because bite marks on the skin will change over time. They are also distorted by the elasticity of the skin, the unevenness of the surface bite, and swelling and healing. At page 174 of the NAS Committee report it confirms that:

"These features may severely limit the validity of forensic odontology.

Also, some practical difficulties, such as distortions in photographs and changes over time in the dentition of suspects, may limit the accuracy of the results.

"The guidelines of the ABFO for the analysis of bite marks list a large number of methods for analysis, including transillumination of tissue, computer enhancement and/or digitalization of the bite mark or teeth, stereomicroscopy, scanning electron microscopy, video superimposition, and histology. The guidelines, however, do not indicate the criteria necessary for using each method to determine whether the bite mark can be related to a person's dentition and with what degree of probability. There is no science on the reproducibility of the different methods of analysis that lead to conclusions about the probability of a match. This includes reproducibility between experts and with the same expert over time. Even when using the guidelines, different experts provide widely differing results and a high percentage of false positive matches of bite marks using controlled comparison studies."

HOW TO LITIGATE FROM A POSITION OF STRENGTH ON AN UNEVEN PLAYING FIELD

To negotiate and litigate from a position of strength, gain the advantage through effective pretrial motions and aggressive discovery tactics. Occasionally, these efforts will properly derail a misguided prosecution. They also provide favorable conditions for the conduct of trial.

In addition to pretrial motions, use alternative means of discovery to learn the prosecution case and discover defenses. Although the due process clause assures us discovery of favorable evidence, the criminal rules do not guarantee us revelation of unfavorable evidence before trial. *U.S. v. Flores-Morales*, 122 F.3d 337 (8th Cir. 1997). Therefore, to gain the facts necessary to take the sting out of prejudicial evidence and to discover favorable evidence, one must think outside of the box.

DISCOVERY BEYOND RULE 16: OBTAINING EVIDENCE AND INFORMATION FOR TRIAL

Rule 16 Federal Rules of Criminal Procedure

Rule 16. Discovery and Inspection

- (a) Governmental Disclosure of Evidence.
 - (1) Information Subject to Disclosure.
 - (A) Statement of Defendant
 - (B) Defendant's Prior Record
 - (C) Documents and Tangible Objects.
 - (D) Reports of Examinations and Tests
 - (E) Expert Witnesses.

Court has inherent power of discovery beyond Rule 16

If the rules do not prohibit the discovery, Courts have discretion to exercise their inherent power to order discovery or provide it via local rule. *Cf. Wise v. Henkel*, 220 U.S. 556, 55 L.Ed. 581, 31 S.Ct. 599 (1911). *See also, U.S. v. Taylor*, 25 FRD 225 (D. NY 1960); *US v. The Honorable Sarah T. Hughes*, 413 F.2d 1244 (5th Cir. 1969), *vacated as moot sub nom, U.S. v. Gifford Hill American, Inc*, 397 US 93 (1970).

Court has supervisory power over federal officials

Under its supervisory power, a court may direct a federal prosecutor or other official to produce discovery beyond Rule 16.

Rule 15 - Depositions

- (a) When Taken.
 - (1) In General. A party may move that a prospective witness be deposed in order to preserve testimony for trial. The court may grant the motion because of exceptional circumstances and in the interest of justice. If the court orders the deposition to be taken, it may also require the deponent to produce at the deposition any designated material that is not privileged, including any book, paper, document, record, recording or data.
 - (h) Deposition by agreement Permitted. The parties may by agreement take and use a deposition with the court's consent.

May not be taken of a party Defendant without the Defendant's consent

A deposition may not be taken of a party Defendant without the defendant's consent. Rule 15 (e)(1) provides that "A defendant may not be deposed without that defendant's consent."

Ex parte deposition

Order compelling prospective government witness to give deposition under oath without the Government present for limited purpose of discovery was unauthorized, **absent evidence that Government had impeded defendants' ability to talk to witness or that witness ever did refuse to talk to defendants or their counsel;** there was nothing improper about witness' refusal to talk to defendants or their counsel unless government counsel was also present. Fed.Rules Cr.Proc. Rule 15(a), *In re United States*, 858 F.2d 153 (5th Cir. 1989).

Written Interrogatories

Depositions may be taken by written interrogatories. Rule 15 (d) provides that depositions "shall be taken and filed in the manner provided in civil actions." Note, however, that this does not permit written interrogatories of the parties, only of witnesses. Rule 15 (g) allows taking of a deposition orally or upon written questions by agreement of the parties with the consent of the court.

Allowed under Exceptional Circumstances

The predecessor to Rule 15 allowed depositions upon a showing that a prospective witness may be unable to attend or prevented him from attending trial, where his testimony was material and where it was also necessary to take his deposition in order to prevent a failure of justice. A similar showing today would also warrant a deposition. However, the current rule allows depositions in "extraordinary circumstances" without defining that term. Some circumstances which have been found to be extraordinary include:

- Foreign National subject to deportation, imprisonment
- Ill health and inability to travel
- Impending death or advanced age

Another exceptional circumstance can include the need to evaluate forensic

scientific evidence before trial to determine its admissibility in your case at such a deposition, under Rule 15(e)(3), the government must provide for use at the deposition any statement of the deponent in the governments possession that the defendant would be entitled to at trial.

Admissibility

Rule 15 (f) allows use of the deposition at trial if the witness is unavailable, or the deposition may be admitted as an inconsistent statement of the witness, to impeach the witness or as the remainder of related testimony consistent with the Rules of Evidence.

- (f) Use of evidence. "A party may use all or part of a deposition as provided by the Federal Rules of Evidence."

OTHER INNOVATIVE WAYS TO OBTAIN DISCOVERY THAT IS NOT FORTHCOMING

RULE 17

Subpoena

- (a) For Attendance of Witnesses; Form; Issuance.

The clerk shall issue a subpoena, signed and sealed but otherwise in blank to a party requesting it, who shall fill in the blanks before it is served

17(b) Defendants Unable to Pay.

The court shall order at any time that a subpoena be issued for service on a named witness upon an ex parte application of a defendant upon a satisfactory showing that the defendant is financially unable to pay the fees of the witness and that the presence of the witness is necessary to an adequate defense.

(c) For Production of Documentary Evidence and of Objects

The court may direct that books, papers, documents or objects designated in the subpoena be produced before the court at a time prior to the trial or prior to the time when they are to be offered in evidence and may upon their production permit the books, papers, documents or objects or portions thereof to be inspected by the parties and their attorneys.

Showing for Pretrial Production

The Supreme Court determined a four part test for showing a subpoena should issue under Rule 17(c) in *U. S. v. Nixon*, 418 U. S. 683, 699-700, 94 S. Ct. 3090, 41 L. Ed. 2d 1039 (1974).

1. Documents are evidentiary and relevant;
2. That they are not otherwise procurable reasonably in advance of trial by exercise of due diligence;
3. That the party cannot properly prepare for trial without such production and inspection in advance of the trial and that the failure to obtain such inspection may tend unreasonably to delay the trial; and
4. That the application is made in good faith and is not intended as a general 'fishing expedition.' See Motion on Trial Prep Tool Box Disk.

Ex parte Request Under 17 (c)

The Court in *U. S. v. Reyes*, 162 F.R.D 468, 470 (S.D.N.Y. 1995) recognized concerns for the attorney client privilege and work product doctrine, among other concerns, and held that 17(c) subpoena procedures could be conducted *ex parte*. See Motion on Trial Prep Tool Box Disk.

Discovery under 18 U.S.C. § 2510 et seq.

The wiretap law at 18 U.S.C. § 2510 et seq. contains its own distinct discovery provision. It provides that "[t]he judge, upon the filing of a motion, may... make available to...person or his counsel for inspection such portions of the intercepted communications, applications and orders..." 18 U.S.C. 2518(8)(d) In addition, the statute requires production of documents related to the interception before the contents may be used at any hearing:

"The contents of any wire, oral, or electronic communication intercepted...shall not be received in evidence or otherwise disclosed in any trial, hearing, or other proceeding...unless each party...has been furnished with a copy of the court order and accompanying application under which the interception was authorized..." 18 U.S.C. 2518(9).

Freedom of Information Act (FOIA), as amended, 5 U.S.C. §552 *et seq.*

[Attorney General Reno decided to] rescind[] a 1981 Reagan administration policy on the defense of agency actions in FOIA litigation ... [ordering that the Justice Department] no longer defend an agency's decision to withhold information merely because there is a 'substantial legal basis' for doing so. Instead, Reno said, in deciding whether to defend a non-disclosure decision, the department will apply a presumption of disclosure.

Administration Tells Agencies to Tilt Toward FOIA Disclosure, 62 USLW 2246 (October 26, 1993).

Matters which may be obtained through the Freedom of Information Act are:

- _ Government Manuals on training and procedure
- _ Agency records
- _ Uses
 - Non-DOJ Government Agency Records (RTC, FCIC)
 - Habeas Discovery
 - Impeachment or cross exam materials
 - As you know, the amended FOIA requires reduction or waiver of search and/or copying fees when release of the requested information would be "in the public interest."

A similar request may be made using the Texas Public Information Act. Texas Government Code Chapter 552.

28 CFR §16.21 *et seq* testimony of or documents from Government Agent or Official

28 CFR §16.21 *et seq.* provide the proper procedure for subpoenaing a government agent, official and documents duces tecum.

Bank Secrecy and Financial Privacy Acts

Under 12 U.S.C. §3404, no government authority may have access to or obtain copies of financial records unless the customer has authorized disclosure under the Financial Privacy act. An exception is when the records are obtained vial a valid

search warrant in compliance with 12 U.S.C. § 3406(b) which requires a subsequent express notice to the customer within 90 days that: “[r]ecords or information concerning your transactions held by the financial institution named in the attached search warrant were obtained by [the agency or department] on (date) for the following purpose: _____. You may have rights under the Right to Financial Privacy Act of 1978.” Under the Act, the financial institution must provide the person regarding whom records are kept with copies of those records and an indication of the government agency to whom the records were sent.

Under the Bank Secrecy Act, the financial institution is required to furnish the person regarding whom records are kept copies of those records.