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Right to Inspect and Test Breath Alcohol Machines: Suspicion Ain't Proof, 33 J. Marshall L. Rev. 1 (1999)

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ARTICLES
RIGHT TO INSPECT AND TEST
BREATH ALCOHOL MACHINES:
SUSPICION AIN'T PROOF

GIL SAPIR* & MARK GIANGRANDE**

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A constitutional and ethical basis exists for inspecting and testing breath alcohol machines as part of presenting evidence with an expert witness. If the evidence requires an expert as a basis for the prosecution, then the accused is entitled to have an expert as well. Expert witness testimony that involves scientific evidence is both constitutionally relevant and material under the Due Process Clause¹ and the Sixth Amendment.² It is only fair that the accused be given meaningful access to competent experts who are willing to challenge testing procedures and results.

INTRODUCTION

Our adversary criminal justice system is designed to ensure the application of the principles set forth in the United States Constitution. The value of liberty is impossible to quantify but clearly cherished by our society.³ The court's primary objective is for fair and impartial enforcement of a person's constitutional rights.

The Sixth Amendment gives to the accused in all criminal prosecutions the right to confront the witnesses against him.⁴ The Confrontation Clause, through the Fourteenth Amendment, includes the right to inspect the breath alcohol machine and challenge the test results upon which the accusation is based.⁵ The government should not prosecute and convict on less than all of the evidence. Simply, suspicion ain't proof.⁶

"In courts of law, forensic testimony often goes unchallenged by a scientifically naive legal community. Forensic methods must be screened with greater care if [equal] justice is to be served."⁷

The most important issue arising out of the chemical test program employing breath methods of analysis is raised by lay people who have no knowledge or experience in this field, but a basic right to question. Lawyers are obligated by their professional integrity to establish the validity of any given breath test for alcohol when the results of such test are to be used as evidence against a client they are representing. This must and should be accomplished by diligent searching interrogation.⁸

A breath alcohol machine test uses expired lung air, not

1. U.S. CONST. amend. V.

2. *Id.* at amend. VI.

3. DAVID L. FAIGMAN, *LEGAL ALCHEMY: THE USE AND MISUSE OF SCIENCE IN THE LAW* 32 (1999).

4. *Id.*

5. U.S. CONST. amend. XIV.

6. KEN ALSTAD, *SAVVY SAYIN'S: LEAN & MEATY ONE-LINERS* 58 (1993).

7. Peter J. Neufeld & Neville Colman, *When Science Takes The Witness Stand*, 262 *SCI. AM.* 46, 46 (1990).

8. Robert B. Forney, *Symposium—Breath Alcohol Tests: Discussion by Robert B. Forney, Ph.D.*, 5 *J. FORENSIC SCI.* 395, 409 (1960).

blood, for its determination of alcohol⁹ content in the person's body at time of testing. This indirect method of analysis between breath and blood relies on various assumptions and extrapolations (partition ratios, testing in elimination phase, Widmark's beta and Rho factor, etc.) in producing a test result. Inherent problems exist with the test results due in part to the results being extrapolated and not directly determined. The sample analysis for breath alcohol concentration (BrAC), testing methodology, and process and procedures are subject to scientific scrutiny. Therefore, the accuracy, reliability, and credibility of BrAC tests are suspect.

Drunk driving prosecutions based upon breath alcohol content are premised upon representations of scientific accuracy and reliability.¹⁰ Accordingly, the lack of scientific reliability adversely affects the defendant's basic constitutional right to fundamental fairness inherent in due process. This basic constitutional construct requires compliance with the appropriate validation of scientific principles for the test results to satisfy due process.¹¹

I. SCIENCE AND THE LEGAL SYSTEM

The movant in legal proceedings must demonstrate the reliability of the test in order to satisfy due process and fundamental fairness. All cases involving criminal charges entail some aspect of scientific evidence and forensic science.¹² In criminal prosecutions, law enforcement extensively relies upon scientific principles and technology. This interdependence is exemplified by the application and use of forensic DNA analysis for identification, or breath alcohol testing devices in drunk driving prosecutions. Scientific or technological evidence¹³ is premised upon the use of expert evidence. It encompasses both

9. Alcohol was redefined as "[t]he intoxicating agent in beverage alcohol, ethyl alcohol or other low molecular weight alcohols including methyl or isopropyl alcohol. Also, acetone interference will be conducted at 0.02% alcohol concentration, assuming a conversion ratio of 365:1." Highway Safety Programs; Model Specifications for Devices to Measure Breath Alcohol, 58 Fed. Reg. 48705, 48707 (1993) (codified at 49 C.F.R. § 199.205 (1995)). Therefore, by administrative fiat non-ethyl alcohols that give false readings are no longer considered contaminants.

10. *Robertson v. State*, 604 So. 2d 783, 788-89 (Fla. 1992).

11. *See State v. Barker*, 629 So. 2d 1119, 1120 (La. 1993) (quoting *State v. Honeyman*, 560 So. 2d 825, 829 (La. 1990)).

12. Forensic science is the application of scientific principles and technological practices to the purposes of justice in the study and resolution of criminal, civil and regulatory issues. American Academy of Forensic Sciences, 1999 Membership Directory and Bylaws, at v.

13. *See John W. Wesley, Scientific Evidence and the Question of Judicial Capacity*, 25 WM. & MARY L. REV. 675, 675-79 (1984).

testimonial and nontestimonial evidence presented by experts.¹⁴ “[T]he testimony offered by . . . specialists is frequently couched in terms of opinions, conclusions, and evaluations which, themselves, are not scientifically measurable.”¹⁵

In the current legal system, success in the courtroom relies upon scientific acumen as much as legal knowledge.¹⁶ A paradox of expert witness testimony is the use of scientific evidence by attorneys. Most lawyers and judges are scientifically unaware and uninformed. They are ill equipped and under-prepared by training and experience to handle the complexities of scientific evidence.¹⁷ Their scientific knowledge parallels only that of a layperson. Neither a science degree nor even a technical background is a judicial requisite for appointment to the United States Supreme Court.¹⁸ Yet, understanding science is, arguably, part of the constitutional duty assumed by legislators, administrators, and judges.¹⁹ Moreover, issues presented by questions of science will most likely be misunderstood by the legal system.²⁰

In order for courts to evaluate forensic science, judges and lawyers must be able to appreciate the scientific issues presented.²¹

The problem of scientific literacy is compounded by the tendency of judges to refuse to reconsider the validity of a particular kind of scientific evidence once it has been accepted by another judge in an earlier case. This practice is founded upon the well-recognized need to respect precedent in order to insure the uniform administration of justice. But in the case of forensic tests, the frequent failure of courts to take a fresh look at the underlying science has been

14. See FEDERAL JUDICIAL CENTER, REFERENCE MANUAL ON SCIENTIFIC EVIDENCE 1 n.1 (1994) [hereinafter FEDERAL JUDICIAL CENTER].

15. ANDRE A. MOENSSENS ET AL., SCIENTIFIC EVIDENCE IN CIVIL AND CRIMINAL CASES 1 (4th ed. 1995).

16. Marc Davis, *Weird Science: Cutting-Edge Advances in the Forensic Sciences Put Lawyers to the Test*, J. MARSHALL L. SCH. MAG., Summer 1997, at 22.

17. See James E. Starrs, *A Crisis in the Forensic Sciences: Real or Imagined?*, SCI. SLEUTHING REV., Winter 1997, at 15; FAIGMAN, *supra* note 3, at xi-xii, 53-54, 64.

18. Wesley, *supra* note 13, at 685.

19. FAIGMAN, *supra* note 3, at 200.

20. “Lawyers as a group evidence an appalling degree of scientific illiteracy, which ill equips them to educate and guide the bench in its decisions on admissibility of evidence proffered through expert witnesses.” Andre A. Moenssens, *quoted in* OFFICE OF TECHNOLOGY ASSESSMENT, UNITED STATES CONGRESS, GENETIC WITNESS: FORENSIC USES OF DNA TESTS 89 (1990). See also David L. Faigman et al., *Check Your Crystal Ball at the Courthouse Door, Please: Exploring the Past, Understanding the Present, and Worrying About the Future of Scientific Evidence*, 15 CARDOZO L. REV. 1799, 1834-35 (1994).

21. Neufeld & Colman, *supra* note 7, at 49.

responsible for many a miscarriage of justice.²²

Educating judges in scientific and technological matters, including the management of expert evidence, is a priority. A difference exists between education and indoctrination. Judges want clear, quality information. They apply similar standards to education as they do to evidence: "make it short, keep it clear and make the quality of your position immediately apparent."²³ The Federal Judicial Center prepared its *Reference Manual On Scientific Evidence* in an attempt to assist judges and all parties involved with litigation in managing expert evidence, "primarily in cases involving issues of science or technology."²⁴ Since judges generally do not have time to do their own research or lack a science background, it is quite apparent that a balanced judicial education in scientific evidence is required nationwide.²⁵

Due to the state's frequent reliance on science and technology, the prosecution of cases utilizing scientific evidence as its fundamental premise demands conformance with rudimentary prerequisites of good science - for example, integrity of quantitative and qualitative analysis. Prosecutions are premised upon the representations of scientific accuracy, reliability and the Authentication Doctrine.²⁶ It is important to realize that faulty forensic science contaminates more than the science portion of the evidence—it contaminates the entire case.²⁷ The lack of scientific reliability detrimentally affects due process and fundamental fairness. These basic constitutional principles require compliance with appropriate validating scientific principles of the test

22. *Id.*

23. Honorable Roderick T. Kennedy, *Someone's on Drugs Here . . . Drugs, Driving Experts and Evidence*, Proceedings of the American Academy of Forensic Sciences, Feb. 1999, at 13 (a full text of the paper Judge Kennedy presented at the proceedings is on file with the Authors).

24. FEDERAL JUDICIAL CENTER, *supra* note 14, at 5.

25. *General Elec. Co. v. Joiner*, 522 U.S. 136, 141 (1997) (noting that a trial court judge is the "gatekeeper" of scientific evidence); Kennedy, *supra* note 23, at 5.

26. The Authentication Doctrine is a prerequisite to reliability. EDWARD J. IMWINKELRIED & NORMAN M. GARLAND, *EXCULPATORY EVIDENCE* § 6-4 (2d ed. 1996). The proponent of an item of evidence must prove that the item is in fact what it is claimed to be. *Id.*

27. See Paul C. Giannelli, *The Abuse of Scientific Evidence in Criminal Cases: The Need for Independent Crime Laboratories*, 4 VA. J. SOC. POLY & L. 439, 441 (1997); George Castelle, *Lab Lessons Learned from the 'Fred Zain Affair'*, CHAMPION, May 1999, at 12, 14; James E. Starrs, *Judicial Control Over Scientific Supermen: Fingerprint Experts and Others Who Exceed the Bounds*, 35 CRIM. L. BULL. 234, 234-76 (1999) [hereinafter *Judicial Control*]; James E. Starrs, *The Seamy Side of Forensic Science: The Mephitic Stain of Fred Salem Zain*, SCI. SLEUTHING REV., Winter 1993, at 7 [hereinafter *Seamy Side*].

results.²⁸

Minimizing uncertainty is at issue in science, especially in forensic science.²⁹ The test result is only the end result of what is sought to be proven. The danger is that admitting only the test result as evidence becomes an expression taken out of context.³⁰

In per se drunk driving prosecutions, the state would prefer the court to believe that its case is premised upon only two simple questions: did the defendant provide a sufficient breath sample into the breath alcohol machine,³¹ and what was the test result. But in reality, a per se drunk driving (DUI) charge is substantially more complex than this typically simplistic representation. The government's case entails more than merely providing just the test results.³² The prosecution is required to prove each element of a per se DUI charge beyond a reasonable doubt. These elements being that the breath alcohol machine (make, model, unit, and serial number) used in the case and its procedures are accurate and reliable for determining the amount of ethanol in a person's blood at the time of driving, to the exclusion of all other compounds.

28. See *State v. Barker*, 629 So. 2d 1119, 1120 (La. 1993). See also *United States v. Bruno*, 333 F. Supp. 570, 574 (E.D. Pa. 1971) (holding that a party offering chromatographic analysis of ink must vouch for the test's correct administration); *Robertson v. State*, 604 So. 2d 783, 789 (Fla. 1992) (holding that the party offering the results of laboratory tests must vouch for the test's correct administration).

29. In order to obtain reliable results, sources of error must be identified and either eliminated or minimized. Error or uncertainty may be classified as three major types—random, systematic (procedural) or gross. HOBART H. WILLARD ET. AL, *INSTRUMENTAL METHODS OF ANALYSIS* 861 (6th ed. 1991).

30. "[W]e cannot say that failure to strike the breathalyzer test results was harmless error. That test was quantitative and it had the seal of scientific approval. Compared to other evidence, the test was likely to be thought the most powerful. It was not merely cumulative." *Commonwealth v. Cochran*, 517 N.E.2d 498, 502 (Mass. App. Ct. 1988). See generally CHARLES T. MCCORMICK, *MCCORMICK'S HANDBOOK OF THE LAW OF EVIDENCE* § 56 (Edward W. Cleary ed., 4th ed. 1992) (discussing the ideas and principles supporting the Doctrine of Completeness).

31. "[I]n patent law, 'machine' is virtually interchangeable with apparatus, mechanism, device, or engine." 1 PETER ROSENBERG, *PATENT LAW FUNDAMENTALS* 6-34 (2d ed. 1996). "A machine is . . . a physical entity, consisting of parts, components, or elements, which are so arranged and organized as to cooperate, when set in motion, to produce a definite, predetermined, and unitary result." *Id.* (citing *Burr v. Duryee*, 68 U.S. 531, 570-71 (1863)).

32. Driving under the influence of alcohol or controlled substances is a criminal offense. The chemical test results in either a presumption of guilt, or per se guilt (where the state permits prosecution for operating a vehicle while having an unlawful blood or breath alcohol level) where the state must prove beyond a reasonable doubt that the statutory and regulatory procedures for chemical testing have been met. W. C. HEAD, *MEDICOLEGAL ASPECTS OF ALCOHOL* 404 (James C. Garriott ed., 3d ed. 1996).

“Expert evidence can be both powerful and quite misleading because of the difficulty in evaluating it.”³³ Therefore, an expert witness should offer testimony addressing proper scientific standards and valid scientific processes and procedures,³⁴ enabling the jury to receive a holistic perspective on the practice of “good science.”³⁵

Good science consists of a valid scientific methodology, principles and processes, not merely the conclusions they generate.³⁶ Good science also requires a determination of whether the result is verifiable and not “pathological science,”³⁷ bad science, or deceptive science. The expert witness is usually the medium through which scientific evidence is brought into the courtroom. The general prevailing perception in most drunk driving cases is that two-thirds of the prosecution’s case relies upon one-third of the evidence—the breath/blood test result. The breath/blood test result is usually the sole deciding factor of intoxication, prosecution, and conviction.

II. RIGHT TO EXPERT WITNESS ASSISTANCE—INDIGENT OR OTHERWISE

The Supreme Court in *Montana v. Egelhoff* held that the Due Process Clause does not guarantee the right to introduce all relevant evidence.³⁸ The Court stated that a defendant does not have the right to offer evidence “that is incompetent, privileged or otherwise inadmissible under standard rules of evidence.”³⁹ A restriction on the right to offer evidence violates the Due Process Clause when or if “it offends some principle of justice so rooted in the traditions and conscience of our people as to be ranked as fundamental.”⁴⁰

Expert witness testimony on scientific evidence and its related test result is generally relevant and material. The expert witness is an integral conduit to the application of science in a court of law.⁴¹ The breath alcohol test result is the end product of

33. *Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579, 595 (1993) (quoting Weinstein, J., 138 F.R.D. 631, 632 (1991)).

34. *Id.* at 590.

35. *Id.* at 593.

36. *Id.* at 593, 595.

37. Marc S. Klien, *Bad Science: The Short Life and Weird Times of Cold Fusion Tubes*, 1 SHEPARD’S EXPERT AND SCI. EVID. Q. 519, 521 (1994).

38. 518 U.S. 37, 41-42 (1996).

39. *Id.*

40. *Id.* at 43 (quoting *Patterson v. New York*, 432 U.S. 197, 201-02 (1977)).

41. Learned Hand has previously stated:

The whole object of the expert is to tell the jury, not facts . . . but general truths derived from his specialized experience. But how can the jury judge between two statements each founded upon an experience confessedly foreign in kind to their own? It is just because they are

what is sought to be proven through a scientific and societal process. The methodology, process, and test result are integral to the prosecution's case and therefore, fundamental to the defense's case.⁴² This right to confront the prosecution's critical evidence through independent testing and its purported analytical result is a defendant's fundamental right that cannot be restricted.⁴³

This Article provides a basis for inspecting and testing breath alcohol machines⁴⁴ and related DUI test equipment,⁴⁵ using an expert witness. The Appendix of this Article includes a sample motion for the independent inspection and testing of breath alcohol equipment. The motion's format is a practical approach to filing a request for inspection and testing. Separate issues beyond the scope of this Article, though related to inspection and expert witness assistance, are: federal and state standardized certification, state compliance with federal regulations, breath alcohol machine discovery, spoliation of evidence, court ordered appropriate inspection,⁴⁶ and corresponding rights in drunk

incompetent for such a task that the expert is necessary at all.

Learned Hand, *Historical and Practical Considerations Regarding Expert Testimony*, 15 HARV. L. REV. 40, 54 (1902), quoted in Jennifer Laser, Note, *Inconsistent Gatekeeping in Federal Courts: Application of Daubert v. Merrell Dow Pharmaceuticals, Inc. to Non-scientific Expert Testimony*, 30 LOY. L.A. L. REV. 1379, 1408 (1997).

42. *Egelhoff*, 518 U.S. at 37.

43. PAUL C. GIANNELLI & EDWARD J. IMWINKELRIED, 1 SCIENTIFIC EVIDENCE 117-18 (2d ed. 1993); Edward J. Imwinkelried & Robert G. Scofield, *The Recognition of an Accused's Constitutional Right to Introduce Expert Testimony Attacking the Weight of Prosecution Science Evidence: The Antidote for the Supreme Court's Mistaken Assumption in California v. Trombetta*, 33 ARIZ. L. REV. 59, 62 (1991) [hereinafter *Recognition of an Accused's Constitutional Right*]. However, in *Caldwell v. Mississippi*, 472 U.S. 320, 323-24 n.1 (1985), the United States Supreme Court declined to address whether as a matter of federal constitutional law, what if any showing would entitle a defendant to private assistance.

44. See A.W. Jones, *Measuring Alcohol in Blood and Breath for Forensic Purposes—A Historical Review*, 8 FORENSIC SCI. REV. 14 (1996). Breath alcohol testing equipment is classified into four categories based upon design and usage: 1) Passive alcohol sensor (PAS), 2) Screening device (also known as preliminary or pre-arrest breath testers—PBTs), 3) Breath alcohol ignition interlock devices (BAIID), and 4) Evidential breath tester (EBTs) commonly called breath alcohol machines.

45. Related DUI testing equipment includes preliminary breath testing (screening) devices and calibrating units (wet bath simulators and dry gas).

46. An appropriate detailed inspection court order would maintain the integrity of the breath alcohol machine, following the state's on-site calibration procedure, while utilizing blind testing with confirmatory split samples being available to the state upon completion of the inspection and testing. There cannot be any adjustments of any kind to the breath alcohol machine either before or after the inspection and testing. The breath alcohol machine must be in the same condition as on the date the defendant's breath sample was taken. Furthermore, all documentation must be provided detailing changes, repairs, maintenance, upgrades, etc., before the inspection and

driving cases.

The legal system creates and perpetuates the expert witness' existence and necessity. But for the rules of evidence, consulting and testimonial expert evidence would be non-existent at trials.

A simplified restatement of *Federal Rules of Evidence* 702 to 706⁴⁷ is that a qualified expert may give his opinion to help the court understand evidence, or to establish a fact in issue. An expert witness is necessary to identify any substance as being a drug, dangerous or otherwise,⁴⁸ or if the accused's position cannot

testing commences.

47. The following is a summary of a Simplified Restatement for Rules 701 through 706 of the FEDERAL RULES OF EVIDENCE:

RULE 701: Lay Opinion Testimony—"If the witness is not an expert, opinion testimony is admissible only when [r]ationally based on perceptions, and [h]elpful to the trier of fact." HOWARD O. BOLTZ, JR. & MARK A. DOMBROFF, FEDERAL TRIAL EVIDENCE 183 (11a A. Press ed., 2d ed. 1998).

RULE 702: Testimony by Experts—"Expert opinions may be admissible if: [t]he testimony assists the trier of fact, and [t]he witness is qualified as an expert." *Id.* at 189.

RULE 703: Bases of Opinion Testimony by Experts—"Expert opinion may be based on facts or data: [a]ctually seen or heard by the expert, or [c]ommunicated to the expert at or before the hearing. Admissibility of the facts or data is not essential if typically relied on in this field." *Id.* at 201.

RULE 704: Opinion on Ultimate Issue—"An expert may express an opinion which addresses an ultimate issue of fact, but opinions or inferences regarding the mental state of the accused are reserved for the trier of fact (when that mental state is an element of the crime charged or a defense to that crime)." *Id.* at 210.2.

RULE 705: Disclosure of Facts or Data Underlying Expert Opinion—"An expert need not give facts supporting the reason for his opinion unless: [t]he court so requires, or [t]he expert is asked for the facts on cross examination." *Id.* at 210.6.

RULE 706: Court Appointed Experts—"The court may: [i]ssue an order to show cause as to why an expert should not be appointed, [r]equest nominations of an expert by parties, and [a]ppoint an expert whether or not the parties agree to that expert, if the expert so consents. The witness shall be informed of his duties in writing, a copy of which is filed with the court. The witness shall communicate his findings to the parties, and: [m]ay be deposed, [m]ay be called to testify, [m]ay be cross-examined, and [s]hall be paid as the court directs. The jury's knowledge of the court appointment is left to the discretion of the court." *Id.* at 212. Rule 706 does not limit parties from calling other experts. *Id.* at 211-12.

See generally FED. R. EVID. 701-06 (providing the text for each of the rules discussed above).

48. *People v. Scott*, 317 N.E.2d 736, 739 (Ill. App. Ct. 1973).

be fully developed without expert witness assistance.⁴⁹ If the evidence requires an expert as a basis of the prosecution, for example, forensic Human Leukocyte Antigen (HLA) and DNA testing for identification, or per se breath alcohol test results in drunk driving cases, then the accused is entitled to have an expert.⁵⁰ It is only fair that the accused be given meaningful access to competent experts who are willing to challenge testing procedures and results.⁵¹ Expert witness testimony regarding scientific evidence is both constitutionally relevant and material under the Due Process Clause and the Sixth Amendment.⁵²

Assistance from a "neutral" state expert or sharing an expert witness with the prosecution does *not* satisfy the constitutional

49. See *Ake v. Oklahoma*, 470 U.S. 68, 79-83 (1985) (holding that an indigent criminal defendant is entitled to assistance of psychiatrist when sanity at the time of the offense is a significant factor in his defense); *United States v. Van Horn*, 26 M.J. 434, 439 (C.M.A. 1988); *Williams v. Martin*, 618 F.2d 1021, 1026 (4th Cir. 1980); Michael J. Yaworsky, *Right of Indigent Defendant in State Criminal Case to Assistance of Chemist, Toxicologist, Technician, Narcotics Expert, or Similar Non-medical Specialist in Substance Analysis*, 74 A.L.R.4th 388 (1989); Michael J. Yaworsky, *Right of Indigent Defendant in State Criminal Case to Assistance of Expert in Social Attitudes*, 74 A.L.R.4th 330 (1989); Ruby B. Weeks, *Right of Indigent Defendant in Criminal Case to Aid of State by Appointment of Investigator or Expert*, 34 A.L.R.3d 1256 (1970). Motions for an expert's assistance, appointment and expectations must be in writing and clearly articulate the basis—a particularized showing. *United States v. Gonzales*, 150 F.3d 1246 (10th Cir. 1988). See also Nancy Hollander & Barbara Bergman, *Getting Witnesses to Federal Court*, CHAMPION, July 1999, at 39; Paul S. Peterson, *Funds for Experts—Running the Gauntlet of Resistance*, CHAMPION, July 1999, at 50.

50. See *Ake*, 470 U.S. at 79-83. Cf. 750 ILL. COMP. STAT. ANN. 45/11(c) (West 1998) (regarding HLA and DNA testing for determining parentage).

51. Edward J. Imwinkelried & Robert G. Scofield, *Attacking the Weight of the Prosecution's Scientific Evidence*, CHAMPION, Apr. 1992, at 6, 7. "The Constitution does not entitle a criminal defendant to the effective assistance of an expert witness." *Wilson v. Greene*, 155 F.3d 396, 401 (4th Cir. 1998). Under *Ake v. Oklahoma*, 470 U.S. 68, 79-83 (1985), an "appropriate" evaluation does not, under the Due Process Clause, prescribe a malpractice standard for court appointed experts (psychiatrists), but rather only ensuring access to an expert without guaranteeing a particular result. *Id.* There is no procedural or constitutional rule for ineffective assistance of an expert witness, rather than ineffective assistance of counsel. The appointment must only satisfy some minimal level of professional competence.

52. See Stephen B. Bright, *Obtaining Funds for Experts and Investigative Assistance*, CHAMPION, June 1997, at 31, 31; Edward C. Monahan & James J. Clark, *Funds for Defense Expertise: What a National Benchmarks Require*, CHAMPION, May 1997, at 12, 12; *Recognition of an Accused's Constitutional Right*, *supra* note 43, at 76. See generally John M. West, Note, *Expert Services and the Indigent Criminal Defendant: The Constitutional Mandate of Ake v. Oklahoma*, 84 MICH. L. REV. 1326 (1986); John F. Decker, *Expert Services in the Defense of Criminal Cases: The Constitutional and Statutory Rights of Indigents*, 51 CINCINNATI L. REV. 574 (1982); Ephraim Margolin & Allen Wagner, *The Indigent Criminal Defendant and Defense Services: A Search for Constitutional Standards*, 24 HASTINGS L.J. 647 (1973).

requirement of an independent, impartial expert, regardless of indigency.⁵³ If one side is allowed to use an expert witness, then the opposite side can engage their own expert witness.⁵⁴

If the expert is deemed crucial to a proper defense, the defendant is entitled to funds for hiring an expert witness.⁵⁵ The expert witness is necessary to either confront the prosecution's case or assist in the presentation of the defendant's case. The party seeking expert witness assistance must demonstrate to the trial court that there is 1) a reasonable probability the expert would be of assistance,⁵⁶ and 2) denial of expert assistance would result in a fundamentally unfair trial.⁵⁷ Additionally, a court's denial of an expert witness is reviewed under the "harmless error" analysis in nearly all cases.⁵⁸

"There can be no equal justice where the kind of trial a man gets depends on the amount of money he has."⁵⁹ The fact that an attorney is retained or appointed does *not* deprive a defendant of

53. *United States v. Sloan*, 776 F.2d 926, 929 (10th Cir. 1985); *United States v. Fessel*, 531 F.2d 1275, 1278-80 (5th Cir. 1976); *Loe v. United States*, 545 F. Supp. 662, 668 (E.D. Va. 1982). See Dennis Candelria, *An Indigent's Right to Expert Witnesses in Criminal Proceedings*, 25 N.M. TRIAL LAW. 97, 109 (1997).

54. Common derogatory synonyms for expert witnesses include: charlatan, whore, prostitute, commercial witness, hired gun, black knight, and courtroom assassin.

55. *People v. Watson*, 221 N.E.2d 645, 648-49 (Ill. 1966); *People v. Wilson*, 453 N.E.2d 949, 953 (Ill. App. Ct. 1983); *People v. Clay*, 311 N.E.2d 384, 386 (Ill. App. Ct. 1974); *State v. Underwood*, 756 P.2d 72 (Or. App. Ct. 1988). See Monahan & Clark, *supra* note 52, at 12; Hollander & Bergman, *supra* note 49, at 38; Peterson, *supra* note 49, at 48.

56. *Messer v. Kemp*, 831 F.2d 946, 960 (11th Cir. 1987) (en banc); *Roseboro v. State*, 365 S.E.2d 115, 117 (Ga. 1988); *People v. Kinion*, 454 N.E.2d 625, 632 (Ill. 1983). Cf. *Wilson*, 453 N.E.2d at 953; *Bright*, *supra* note 52, at 32; Monahan & Clark, *supra* note 52, at 12.

57. See *United States v. Hartfield*, 513 F.2d 254, 258 (9th Cir. 1975) (discussing that federal relief is available for a state's denial of expert assistance); *Moore v. Kemp*, 809 F.2d 702, 712 (11th Cir. 1987). See generally *State v. Powers*, 537 P.2d 1369 (Idaho 1975); *State v. Ryan*, 334 A.2d 402 (N.J. 1975); *Torres v. Municipal Court of Los Angeles*, 123 Cal. Rptr. 553 (1975).

58. *Fitzgerald v. State*, 972 P.2d 1157, 1168 (1998).

59. *Griffin v. Illinois*, 351 U.S. 12, 19 (1956). Cf. *People v. Kinion*, 454 N.E.2d 625, 630-31 (Ill. 1983); *Wilson*, 453 N.E.2d at 953. See also 18 U.S.C. § 3006A(a) (1994) related to the adequate representation of defendants, which reads in part:

Choice of Plan. Each United States Court, with the approval of the judicial council of the circuit, shall place in operation throughout the district a plan for furnishing representation for any person financially unable to obtain adequate representation in accordance with this section. Representation under each plan shall include counsel and investigative, expert, and other services necessary for adequate representation.

Id.

his right to a court appointed expert witness.⁶⁰

There is a rebuttable presumption that a defendant is indigent if he has appointed counsel.⁶¹ Even though a person is able to hire private counsel, this does not preclude a later finding of indigency.⁶² It is not uncommon for many attorneys to encounter a newly indigent client immediately upon payment of a retainer.⁶³

An expert may be appointed by the court, or the court may provide funds to engage the services of an expert.⁶⁴ The limiting of assistance of experts is not a rigid upper boundary but a general caution to trial courts.⁶⁵ A statutory cap on fees and expenses causes great prejudice to the indigent defendant.⁶⁶ An unreasonable cap on fees makes the client's right to effective assistance of counsel dependent upon his attorney's ability and willingness to finance the case. Statutory caps not only constrain the attorney, but also interfere with the trial court's ability to guarantee an indigent defendant a fair trial.

Both the application and request for an expert's services, and the proceedings to determine whether to grant the request are *ex parte*, so that the defendant will not have to make a premature disclosure of his case, including work-product information.⁶⁷ If the court denies the defendant funds for necessary experts, he or she should seek interlocutory relief from a higher court.⁶⁸

60. 18 U.S.C. § 3006A(e)(1) (1994); A.B.A. STANDARDS FOR CRIMINAL JUSTICE, PROVIDING DEFENSE SERVICES Standard 5-1.4 (3d ed. 1992).

61. *Hernandez v. Superior Court*, 12 Cal. Rptr. 2d 55 (1992).

62. *People v. Ortiz*, 275 Cal. Rptr. 191 (1990); *People v. Castillo*, 284 Cal. Rptr. 382 (1991).

63. EDWARD KUWATCH, CALIFORNIA DRUNK DRIVING LAW 8-15 (1999).

64. Both the application and request for an expert's services and the proceedings to determine whether to grant the request are *ex parte* so that the defendant will not have to make a premature disclosure of his case, including work product information. 18 U.S.C. § 3006A(e)(1) (1994); *United States v. Lawson*, 653 F.2d 299, 304 (7th Cir. 1981). See *United States v. Sutton*, 464 F.2d 552, 553 (5th Cir. 1972) (holding that it was an error not to grant an *ex parte* hearing); *People v. Worthy*, 167 Cal. Rptr. 402, 407 (Cal. Ct. App. 1980).

65. *People v. Kinion*, 454 N.E.2d 625, 631 (Ill 1983).

66. Cf. 725 ILL. COMP. STAT. ANN. 5/1113-3(d) (West 1998) (stating that the court may order the county treasurer to pay reasonable compensation for necessary expert witness fees not to exceed \$250 in capital cases).

67. See 18 USC 3006A(e) (providing in part that "[c]ounsel for person who is financially unable to obtain investigative services necessary for adequate representation may request them in an *ex parte* application"). See also *United States v. Salameh*, 152 F.3d 88, 117 (2d Cir. 1998), *cert. denied*, 119 S. Ct. 1345 (1999); *United States v. Lawson*, 653 F.2d 299, 304 (7th Cir. 1981); *United States v. Sutton*, 464 F.2d 552, 553 (5th Cir. 1972) (holding that error not to grant *ex parte*); *People v. Worthy*, 167 Cal. Rptr. 402 (1980). See generally INDIGENT DEFENSE HANDBOOK § 3 (James G. O'Haver ed., 1989) (discussing expert witnesses and their associated costs).

68. *Fitzgerald v. State*, 972 P.2d 1157, 1177 (1998); *Peterson*, *supra* note 49, at 51.

III. ADMISSIBILITY OF SCIENTIFIC EVIDENCE

Before any item can be considered as evidence, a proper legal foundation must be laid for its admission. Both procedural rules and the substantive law of evidence require a condition precedent to the admission of an item into evidence. Compliance with the item's condition precedent is necessary in order to lay a foundation.⁶⁹ The primary procedural rules for scientific and expert evidence are governed by federal and state statutes, the FEDERAL RULES OF EVIDENCE,⁷⁰ and case law, and are applied through the cases of *Frye v. United States*⁷¹ and *Daubert v. Merrell Dow Pharmaceuticals, Inc.*⁷²

A predominant question in the area of scientific evidence is the criteria trial courts use to permit expert witnesses to testify regarding scientific, technical, or other specialized knowledge. The underlying assumption of this issue is that juries tend to believe almost anything the professed expert says, and therefore, judges "should protect impressionable jurors from experts who lack objective credibility."⁷³ The United States Supreme Court has sought to resolve this question through rulings in three cases, commonly known as the "Daubert Troika." These cases consist of *Daubert*,⁷⁴ *Joiner*,⁷⁵ and *Kumho Tire*.⁷⁶

Frye focuses on the nature of the expert opinion through general acceptance in the community of admissibility.⁷⁷ However, the Court in *Daubert* focused on the reliability requirement for valid scientific methodology and the process that the "scientific expert" used to reach his opinion.⁷⁸ The latent, unanswered

69. John A. Tarantino, TRIAL EVIDENCE FOUNDATIONS § 100 (Thomas W. Overton ed., 1999).

70. FED. R. EVID. 702-06.

71. 293 F. 1013 (D.C. Cir. 1923). The *Frye* court determined that admissibility is based upon the nature of the expert opinion through its general acceptance in the scientific community. *Id.* at 1014.

72. 509 U.S. 579 (1993). See Huey v. United Parcel Serv., Inc., 165 F.3d 1084, 1086-87 (7th Cir. 1999); Hall v. Baxter Healthcare Corp., 947 F. Supp. 1387, 1395-98 (D. Or. 1996); Edward J. Imwinkelried, *The Next Step After Daubert: Developing a Similarly Epistemological Approach to Ensuring the Reliability of Nonscientific Expert Testimony*, 15 CARDOZO L. REV. 2271, 2276-77 (1994); Jennifer Laser, Note, *Inconsistent Gatekeeping in Federal Courts: Application of Daubert v. Merrell Dow Pharmaceuticals, Inc. to Nonscientific Expert Testimony*, 30 LOY. L.A. L. REV. 1379, 1403 n.231 (1997); Kenneth J. Chesebro, *Galileo's Retort: Peter Huber's Junk Scholarship*, 42 AMER. U. L. REV. 1637, 1642 (1993).

73. Joseph F. Madonia, *Kumho Tire Steers New Course on Expert-Witness Testimony*, CHI. DAILY L. BULL., July 2, 1999, at 5.

74. *Daubert*, 509 U.S. at 579.

75. General Elec. Co. v. Joiner, 522 U.S. 136, 141 (1997).

76. *Kumho Tire Co. v. Carmichael*, 119 S. Ct. 1167, 1174 (1999).

77. *Frye v. United States*, 293 F. 1013, 1014 (D.C. Cir. 1923).

78. The *Daubert* standard for evaluating scientific evidence is based on reliability. The *Daubert* test is relevant for "good science." The reliability

question was whether *Daubert* only applied to experts offering opinions on natural or Newtonian sciences (chemistry, toxicology, physics, medicine, engineering, etc.), or also applied to “soft” or social sciences (psychology, document, hair, bitemark, handwriting analysis, firearms identification comparisons, etc.) and to other “technical experts” who offer specialized testimony (real estate values, design defects, standards of care, and “state of the art” issues).⁷⁹

The *Daubert* decision made judges “gatekeepers” of science⁸⁰ and expert evidence in courts of law.⁸¹ It heightened the need for judicial awareness of scientific reasoning and methods.

Evidentiary reliability is now based upon scientific validity.⁸² The trial judge is assigned a “gatekeeping responsibility” to make “a preliminary assessment of whether the reasoning or methodology underlying the testimony is scientifically valid and whether that reasoning or methodology properly can be applied to the facts in issue.”⁸³ This “admissibility standard” of evidence demands an understanding by judges of the principles and methods that underlie scientific studies and the reasoning upon which expert evidence is based. “Unfortunately, forensic evidence is not adequately tested in the crucible of court. Not only are judges ill-equipped to evaluate critically the reliability of scientific evidence, lawyers routinely fail to assess, much less challenge, the reliability of the particular test. The ‘crucible of the court’ is

prong of scientific evidence is: 1) Whether the scientific theory “can be (and has been) tested”, 2) Whether the scientific theory “has been subjected to peer review and publication”, 3) The “known or potential rate of error” of the scientific technique, and 4) Whether the theory has received “general acceptance” in the scientific community. *Daubert*, 509 U.S. at 593-94.

In evaluating the second prong, relevance, trial courts must consider whether the particular reasoning or methodology offered can be properly applied to the facts in issue to “fit.” *Id.* at 591-92. There must be a valid scientific connection and basis to the pertinent inquiry. *Id.*

79. *Id.* at 592.

80. “The Supreme Court in *Daubert* instructed trial judges to insure the reliability of all scientific expert testimony, but it did not specify which expert evidence is ‘scientific’ and thus subject to *Daubert*’s” analysis and scrutiny. *Laser, supra* note 72, at 1403. “[W]hat distinguishes science from other forms of knowledge—what is it that makes science scientific.” *Id.* at n.231.

81. FAIGMAN, *supra* note 3, at 58-64.

82. See *Daubert*, 509 U.S. at 591 & n.9 (stating that validity is the ability to produce an accurate result and reliability is ability to reproduce repeatable valid results).

83. *Id.* at 589, 592-93 & n.7. Judges must “ensure that any and all scientific testimony or evidence admitted is not only relevant but reliable. [Therefore,] the court must determine at the outset [whether an expert’s testimony] will assist the trier of fact to understand or determine a fact in issue,” based upon preliminary assessment of scientifically valid reasoning or methodology being applied to the facts in issue. *Hall v. Baxter Healthcare Corp.*, 947 F. Supp. 1387, 1396 (D. Or. 1996).

therefore a meaningless safeguard.”⁸⁴

Joiner upheld the trial court’s “gatekeeping” function to determine the admissibility of expert witness testimony absent an abuse of judicial discretion.⁸⁵ The *Joiner* Court allowed for further expansion of judicial inquiry into relevance and reliability of scientific testimony.⁸⁶

Kumho Tire Co. extended *Daubert*’s general proposition of its reliability requirement to all expert opinions (technical and other specialized knowledge), and was held applicable to both civil and criminal cases.⁸⁷ The distinction between “scientific knowledge” and “technical” or “other specialized knowledge” is illusory and without support in the federal rules.⁸⁸ Therefore, *Daubert* applies to all expert evidence and testimony, regardless of whether it is “scientific” in nature.⁸⁹ Furthermore, the trial court is not required to hold a “*Daubert* hearing” every time expert testimony is challenged.

In 1998, Congress, in response to *Daubert* and its progeny, proposed an amendment to *Federal Rule of Evidence* 702. The proposed amendment added the following clause: “provided that (1) the testimony is sufficiently based upon reliable 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.”⁹⁰ The Advisory Committee notes state that the “amendment does not distinguish between scientific and other forms of expert testimony. The trial court’s gatekeeping function applies to testimony by any expert.”⁹¹

Frye is no longer controlling in federal proceedings.⁹² Each

84. “In *Daubert v. Merrell Dow Pharmaceuticals*, Justice Blackmun expressed confidence in the capacity of federal judges to undertake this task. The Chief Justice was considerably less sanguine on this subject.” Peter J. Neufeld, *Have You No Sense of Decency*, 84 J. CRIM. L. & CRIMINOLOGY 189, 190 n.5 (1993). See FAIGMAN, *supra* note 3, at xi-xii, 53-54, 64.

85. *General Elec. Co. v. Joiner*, 522 U.S. 136, 138-39 (1997).

86. *Id.*

87. *Kumho Tire Co. v. Carmichael*, 119 S. Ct. 1167, 1171, 1174 (1999). The *Kumho* Court noted, “there are many different kinds of experts and many different kinds of expertise.” *Id.* at 1175. For a discussion on categories, not types, of experts based on *Kumho Tire*, read DAVID L. FAIGMAN, *LEGAL ALCHEMY: THE USE AND MISUSE OF SCIENCE AND THE LAW* 76 (1999). There are literally dozens of subspecialties in forensic science—unfortunately, neither their notoriety nor their impressive labels guarantee their value to the law. *Id.*

88. *Kumho Tire Co.*, 119 S. Ct. at 1171, 1174.

89. *Id.*

90. 181 F.R.D. 144 (1999). See *Federal Judge Outlines Proposed Changes to Rules Governing Opinion Testimony*, 64 CRIM. L. REP. 461, 478 (1999) (stating that the proposed implementation date of the amendment is December 1, 2000).

91. 181 F.R.D. 144 (1999).

92. The FEDERAL RULES OF EVIDENCE superseded the *Frye* test. *Daubert*,

state however, may adopt its own evidentiary standards and follow *Frye*, *Daubert*,⁹³ or any other constitutionally acceptable standard of evidence. Therefore, knowing which case law is relevant to the evidentiary standards within a jurisdiction is important.

IV. PREMISE OF PER SE DUI CHARGE

As mentioned earlier, in a typical DUI prosecution, the state premises its case upon two simple questions: (1) did the defendant provide an adequate breath sample into the breath alcohol machine; and (2) what was the test result. However, a per se driving-under-the-influence of alcohol charge is substantially more complex than the prosecution's simple representation. The prosecution's case entails more than merely providing the test results. Specifically, the prosecution must prove beyond a reasonable doubt, whether the individual breath alcohol machine and the testing procedure used in the case is accurate and reliable for determining the amount of ethanol in a person's blood at the time of driving, to the exclusion of all other compounds. The breath alcohol test ticket is only the end result of what is sought to be proved; specifically, ethanol intoxication at a "per se" level of 0.10% BrAC.⁹⁴ Admissibility of breath test evidence is based on "an assumption of scientific reliability."⁹⁵ "Implicit in the assumption of reliability is that the device is working properly."⁹⁶ Under the Doctrine of Completeness,⁹⁷ the breath analysis and ticket is a culmination of an inseparable process that must be read and explained in its entirety. Otherwise, for the end result, the BrAC, will be taken out of context and distorted.⁹⁸

509 U.S. at 586-87. Nothing in FED. R. EVID. 702 "establishes 'general acceptance' as an absolute prerequisite to admissibility." *Id.* at 588.

93. See Joseph R. Meaney, *From Frye to Daubert: Is a Pattern Unfolding?*, 35 JURIMETRICS J. 191, 192-94 (1995).

94. Statutory per se alcohol levels of intoxication vary between states (0.08% to 0.10%) and the federal government (0.04%). See, e.g., 49 U.S.C. § 31310(a) (1994) (stating that a blood alcohol concentration of 0.04% constitutes driving a commercial motor vehicle under the influence); 625 ILL. COMP. STAT. ANN. §5/11-501 (West Supp. 1999) (stating that a person is forbidden to drive with an alcohol concentration of 0.08% or more in his blood or breath); MINN. STAT. § 169.121(d) (1986) (making it a misdemeanor for a person to drive with a blood alcohol concentration of 0.10% or more).

95. *Commonwealth v. Cochran*, 517 N.E.2d 498, 500 (Mass. App. Ct. 1988).

96. *Id.*

97. See generally MCCORMICK, *supra* note 30 (discussing the ideas and principles supporting the Doctrine of Completeness).

98. Gil Sapir et al., *Breath Alcohol Machines: Evidence Foundation Requirements in Illinois*, 22 J. MARSHALL L. REV. 1, 7 (1988) [hereinafter *Breath Alcohol Machines*].

V. STANDARD OF PROOF

The Due Process Clause of the Constitution's Fourteenth Amendment prohibits conviction of an individual for a criminal offense, except upon proof of guilt beyond a reasonable doubt for each element of the alleged crime.⁹⁹ The standard of proof in a DUI case requires that the prosecution must prove each element beyond a reasonable doubt, using good faith evidence. Doubt can be created by the evidence, lack of evidence, or conflicts in the evidence. The prosecution has an affirmative duty to fairly and impartially present evidence on behalf of the government. The state must present a good faith prosecution¹⁰⁰ and bring all evidence to the attention of the court.¹⁰¹ The party offering results of laboratory tests must also vouch for the correct administration of those tests.¹⁰² The results of a breath test are only relevant as circumstantial evidence of intoxication.¹⁰³ The breath test is subject to collateral attack and is *not* the defining factor in determining guilt.¹⁰⁴

The government must not present either perjured or misleading testimony,¹⁰⁵ and it has a duty to disclose exculpatory evidence.¹⁰⁶ It must abide by legal and ethical responsibilities when using scientific evidence and relying on forensic experts.¹⁰⁷ The ethical responsibilities of lawyers are determined by each state through its disciplinary rules of professional conduct. The standards of prosecutorial conduct are codified in the advisory *A.B.A. Standards for Prosecution Function and Defense*

99. *In re Winship*, 397 U.S. 358, 363-64 (1970). See Michael Mears, *Guilty, Not Guilty, Innocent*, CHAMPION, June 1997, at 20, 20.

100. See *People v. Cornille*, 448 N.E.2d 857, 866 (Ill. 1983) (stating that a prosecutor has a duty to check the credentials of its expert witnesses).

101. See *Imbler v. Craven*, 298 F. Supp. 795, 811-12 (C.D. Cal. 1969) (holding that a prosecutor's suppression of evidence of a third fingerprint violates due process).

102. See *United States v. Bruno*, 333 F. Supp. 570, 574-75 (E.D. Pa. 1971) (holding that chromatographic analysis of ink is inadmissible because it did not follow accepted laboratory practices).

103. *Denison v. Anchorage*, 630 P.2d 1001, 1003-04 (Alaska Ct. App. 1981).

104. *Id.* See *State v. Lowther*, 740 P.2d 1017, 1020 (Haw. Ct. App. 1987) (holding that a defendant has a "right to challenge the general reliability of breath testing devices"); *People v. Alvarez*, 515 N.E.2d 898, 900 (N.Y. 1987).

105. *Cornille*, 448 N.E.2d at 866. See *Imbler*, 298 F. Supp. at 806 (stating that a prosecutor allowing a witness to give false testimony violates due process).

106. *Imbler*, 298 F. Supp. at 811.

107. See *State v. Heinrich*, 492 S.W.2d 109, 114 (Mo. Ct. App. 1973) (detailing the stringent duties and responsibilities of prosecutors). The prosecutorial office is a quasi-judicial one in which the prosecutor bears a heavy duty to "vouchsafe the defendant a fair and impartial trial—based upon facts, not guesswork; legitimate inferences from the facts, not prejudice; cool analysis and decision, not passion." *Id.*

*Function.*¹⁰⁸

The duty of a prosecutor is to “seek justice, not merely to convict.”¹⁰⁹ The United States Supreme Court in *Berger v. United States*, stated the prosecutor’s role in the criminal justice system when the Court wrote:

[the prosecutor] is the representative not of an ordinary party to a controversy, but of a sovereignty whose obligation to govern impartially is as compelling as its obligation to govern at all; and whose interest, therefore, in a criminal prosecution is not that it shall win a case, but that justice shall be done. As such, he is in a peculiar and very definite sense the servant of the law, the twofold aim of which is that guilt shall not escape or innocence suffer. He may prosecute with earnestness and vigor - indeed, he should do so. But, while he may strike hard blows, he is not at liberty to strike foul ones. It is the obligation of a prosecutor to refrain from improper methods calculated to provide a wrongful conviction as it is to use every legitimate means to bring about a just one.¹¹⁰

The government has the duty to disclose exculpatory evidence, even in the absence of a request, if the withheld evidence considered as a whole results in a “reasonable probability” that a different result would have been obtained.¹¹¹ The defendant does not have the burden of establishing that a different result was probable, but only that suppression of the evidence “undermines confidence in the outcome of the trial.”¹¹² The governmental obligations exist regardless of the good or bad faith of the prosecutor, and even if the police have failed to disclose the evidence to him.¹¹³

If a technique to determine BrAC is used with improper methods, then it is not scientifically acceptable.¹¹⁴ The breath test result is only as reliable as the machine, the operator, and the procedures followed. Faulty breath alcohol machines, careless technicians, or unscientific procedures can, and often do, lead to unreliable results.

Current DUI laws do not always address proper methods and procedures for breath alcohol testing, such as quality control, certifying of calibration equipment, replicate testing,

108. A.B.A. STANDARDS FOR CRIMINAL JUSTICE, PROSECUTION FUNCTION DEFENSE FUNCTIONS Standards 3-3.1(a), 3-3.3, 3-5.6, 3-5.7 (3d ed. 1993).

109. MODEL CODE OF PROFESSIONAL RESPONSIBILITY EC 7-13 (1986).

110. 295 U.S. 78, 88 (1935).

111. *Imbler*, 298 F. Supp. at 811.

112. *Kyles v. Whitley*, 514 U.S. 419, 434 (1995).

113. *Id.* at 421.

114. See generally *Kumho Tire Co. v. Carmichael*, 119 S. Ct. 1167, 1175 (1999) (stating that scientific evidence must have “a reliable basis in the knowledge and experience of [the relevant] discipline”); *Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579, 590 (1993) (discussing the admissibility of scientific evidence).

reproducibility of results, or uniform test procedures. All of these elements are essential to credible and reliable scientific information.

The prosecution offers the breath or blood test result as an absolute value, not a "plus or minus" deviation from the test result. However, a mechanically functioning machine is not necessarily an accurate one.¹¹⁵ Further, the defendant need not show that the test result is below the statutory per se intoxication level, but only needs to establish that the test result, as offered into evidence, is unreliable. A defendant does *not* have to prove his or her innocence.

VI. LEGISLATIVE APPROVAL—NOT IRREFUTABLE EVIDENCE

State statutes and regulations generally govern all forms of chemical testing for drunk driving prosecutions. The manner, methodology, and procedures of testing, the qualifications of individuals performing those tests, and even the methods of reporting test results are typically governed by statutes and regulations.

The prosecution's position is that breath alcohol machines are inherently reliable based upon legislative acceptance, statutory enactment, and proven scientific procedures.¹¹⁶ The assumption raises a mistaken and conclusive presumption, through legislative approval, of the scientific accuracy and reliability of breath alcohol machines. The legislature cannot enact laws providing for the automatic admissibility of evidence while denying a person's right of confrontation to challenge that evidence.¹¹⁷ Therefore, breath alcohol machines are legislatively and socially deemed inherently trustworthy and beyond reproach. Accordingly, the prosecution's positions, perceptions, and beliefs are misplaced.¹¹⁸

The defendant has a constitutional right under the Sixth Amendment to introduce rebuttal testimony regarding the prosecution's scientific evidence in drunk driving cases.¹¹⁹ "[D]ue

115. *State v. Rolison*, 733 P.2d 326, 329 (Haw. Ct. App. 1987).

116. *See State v. Vega*, 465 N.E.2d 1303, 1308 (Ohio 1984) (stating that the breath alcohol machine is legislatively recognized, "an accused may not make a general attack upon the reliability and validity of the breath testing instrument").

117. *See Crane v. Kentucky*, 476 U.S. 683, 690 (1986) (holding that evidence related to the manner a confession was obtained could not be excluded because it bears on the credibility of the confession). *See also* FED. R. EVID. 104(e) (stating that the admissibility decision does not limit the "right of a party to introduce before the jury evidence relevant to weight or credibility").

118. The reliability of approved methods and results obtained from chemical tests for alcohol intoxication are increasingly being questioned. Alan Wayne Jones & Barry K. Logan, *DRUG ABUSE HANDBOOK 1007* (Steven B. Karch ed., 1998).

119. *Recognition of an Accused's Constitutional Right*, *supra* note 43, at 74.

process will not allow the results of a chemical test . . . to be conclusively presumed accurate."¹²⁰

The basic laws of evidence are applicable to breath alcohol testing. Governmental approval of the equipment only establishes minimum uniform performance criteria as a basis for foundational admissibility. Neither the statute nor administrative regulations contain any language that breath alcohol test results are un rebuttable, absolute proof of a per se drunk driving violation and subsequent guilt.

"A legislature cannot conclusively establish the general reliability of a breath alcohol machine when it statutorily approves the device, process, methods and operation."¹²¹ While the legislature may provide for the admissibility of chemical tests, "the [l]egislature may not declare the weight to be given to evidence or what evidence shall be conclusive proof of an issue of fact . . . thus the test results are not 'unassailable.'"¹²² Clearly, the legislature and administrative agencies cannot determine the weight and credibility of breath alcohol testing evidence. To do so would usurp the jury's function and violate due process.

The legislature has approved the techniques and methods of performing chemical analysis of a person's breath. The statute and rules do not provide that the methodology must guarantee the results as completely accurate.¹²³ The state's administrative agencies have only approved the techniques and methods of performing chemical analysis of a person's breath. Accordingly, the defendant is also permitted to show that the breath test did not conform to the administrative regulations, manufacturer's recommendations, or accepted scientific procedures.¹²⁴

"Today's evidential breath alcohol testing devices relied upon in drunk driving enforcement predominantly employ reagent, infra-red or fuel cell technology for analysis and a wet bath standard (breath alcohol simulator)¹²⁵ for external calibration with

120. Gil Sapir & Mark Giangrande, *Predominantly Popular, Patently Practical Patents in Breath Alcohol Testing*, CHAMPION, Nov. 1996, at 38, 38 [hereinafter *Predominantly Popular*] (quoting *Barcott v. State*, 741 P.2d 226, 230 (Alaska 1987)). See *State v. Lowther*, 740 P.2d 1017, 1019-20 (Haw. Ct. App. 1987).

121. *Predominantly Popular*, *supra* note 120, at 38.

122. *Id.* (quoting *Lowther*, 740 P.2d at 1020).

123. *State v. Balderson*, 910 P.2d 1138, 1140 (Or. Ct. App. 1996).

124. See *id.* at 1140-41.

125. *Predominantly Popular*, *supra* note 120, at 38.

The wet bath standard is an apparatus which uses vapor from an ethanol and water solution to simulate a breath sample. The purpose of a simulator is insure that the breath alcohol machine is functioning within statutory tolerances and working properly when the test sample is analyzed through use as a control test. The ethanol simulator solution has a parts per million vapor content with a primary concentration of .100%.

an ethanol solution or an external dry gas standard."¹²⁶ Numerous textbooks, newsletters, and resources are available that provide specialized and detailed information regarding the science and law of drunk driving litigation.¹²⁷

In breath alcohol testing, the purpose is quantification and qualification of ethanol to the exclusion of all other compounds.¹²⁸ It is noteworthy that CMI, Inc.'s written warranty for its Intoxilyzer Model 5000 series¹²⁹ specifically excludes warranties of merchantability and fitness for a particular purpose. Therefore, it may be proposed the Intoxilyzer Model 5000 is not warranted for

Id. at n.4 (quoting R. N. Harger, et. al, *The Partition Ratio of Alcohol Between Air and Water, Urine and Blood; Estimation and Identification of Alcohol in these Liquids from Analysis of Air Equilibrated with Them*, 183 J. OF BIOLOGICAL CHEM. 197 (1950) (discussing the simulator solution, contamination, and its procedures)). See Highway Safety Programs, Standards for Calibrating Units for Breath Alcohol Testers, 49 Fed. Reg. 48,864 (1984) (discussing the conversion of the standard for breath alcohol testing calibration units from mandatory standard to model specifications); Modified and Conforming Products List, 62 Fed. Reg. 43,416 (1997). See also Stanley J. Broskey, *A Note on the Lung Simulator: Does it Really Reflect the Human Lungs?*, DWI J.L. & SCI., Nov. 1988, at 8; *Breath Alcohol Machines*, *supra* note 98, at 14; PATRICK HARDING, *MEDICOLEGAL ASPECTS OF ALCOHOL* 184-86 (James C. Garriott ed., 3d ed., 1996) (discussing breath alcohol simulators); 3 DONALD H. NICHOLS, *DRINKING/DRIVING LITIGATION* § 27:17 (1996).

126. *Predominantly Popular*, *supra* note 120, at 38.

Generally, a certified dry gas standard for calibration, made by gravimetric process, utilizes a single phase, non-aqueous mixture of alcohol (ethanol) at a specific concentration with a carrier gas of anhydrous argon at room temperature, in a pressurized canister or tank. Nitrogen and carbon dioxide are unsatisfactory for use as a carrier gas in this system.

Id. See Donald G. Hutson, *Standardizing of Alcohol-Content Measuring Apparatus*, United States Patent No. 3,847,551 issued Nov. 12, 1974; Donald G. Hutson, *Method of Standardizing IR Breath Alcohol Device*, United States Patent No. 4,495,418 issued Jan. 22, 1985.

127. See Gil Sapir, *Basic Forensic and Scientific Evidence Textbooks: An Attorney's Indispensable Arsenal*, CHAMPION, Nov. 1995, at 39, 39 (providing a bibliography of "a selective core collection of reference materials used in forensic science," including drunk driving cases).

128. *Predominantly Popular*, *supra* note 120, at 38. Determination of ethanol (presence and amount) in an expired lung air sample is generally based upon known physical and chemical properties of similar compounds (alcohols, ketones, aldehydes, hydrocarbons, etc.) using analytical methods and techniques, including, but not limited to: infrared spectrophotometry, electrochemical oxidation/fuel cell, chemical oxidation/photometry, solid state semiconductor (Taguchi) gas sensor, and gas chromatography.

129. Warranty, Intoxilyzer Model 5000 series 564, 566, and 568G (on file with Authors). The Intoxilyzer Model 5000 uses infrared technology unless otherwise stated. The "G" designation is for gas. See Gil Sapir, *First Draw Your Curves—Then Plot The Readings: Oregon, the Intoxilyzer Model 5000 and Daubert*, DRINKING DRIVING L. LETTER, July 1994, at 189.

the particular purpose of breath alcohol testing.¹³⁰ Other manufacturers of breath alcohol testing equipment arguably have less than full confidence in their products as evidenced by "limited" warranties for their products.

The BrAC is only relevant circumstantial evidence of intoxication.¹³¹ Approval by the state legislature or administrative agency does not make the breath alcohol machine or its test results irrefutable. The state legislatures and administrative agencies usually approve breath alcohol testing equipment based upon the federal government's Conforming Products List (CPL). Use of generic trademark terminology, for example "breathalyzer," is inappropriate and incorrect.¹³² Each breath alcohol machine, make and model is unique.¹³³

"Breath alcohol testing equipment for detection and prosecution of driving while under the influence of alcohol must be approved for use by the National Traffic Safety Highway Administration (NTSHA) and published on its CPL."¹³⁴ Additionally, "[g]overnmental certification or approval¹³⁵ of this

130. *Predominantly Popular*, *supra* note 120, at 38.

131. *Id.* See *People v. Alvarez*, 515 N.E.2d 898, 900 (N.Y. 1987); *People v. Bryant*, 499 N.E.2d 413, 418 (Ill. 1986) (stating that the jury in reaching its verdict should consider circumstantial evidence along with other evidence); *Denison v. Anchorage*, 630 P.2d 1001, 1003 (Alaska Ct. App. 1981).

132. *Predominantly Popular*, *supra* note 120, at 39.

133. See *id.* at 38-39. Several registered trademarks for breath alcohol machines are: Alcotest, Draeger, National Draeger, Durango, Colo.; Breathalyzer, Smith & Wesson Electronics Co., Springfield, Mass.; Data Master, Bac Verifier, National Patent Analytical Systems, Mansfield, Ohio; Intoximeter, Intoximeters, Inc., St. Louis, Mo.; Intoxilyzer, CMI, Inc., a subsidiary of MPH/MPD Inc., Owensboro, Ky. *Id.* at 39.

134. *Predominantly Popular*, *supra* note 120, at 38. The Conforming Products List was

[f]ormerly known as qualified products list. The list was initially created so states could use federal funds to purchase approved equipment.

Breath test units may be used if they are not on the conforming products list providing the unit can comply with relevant scientific standards and scrutiny in a court of law.

Id. See Edward Kuwatch, CALIFORNIA DRUNK DRIVING LAW ch. 9, § 3(G)(e) (1999).

135. See Highway Safety Programs: Model Specifications for Devices to Measure Breath Alcohol, 63 Fed. Reg. 10,066, 10,066-68 (1998) (listing a Conforming Products List of Evidential Breath Measurement Devices); ILL. ADMIN. CODE tit. 77, § 510.40(c), (d) (1999) (stating the requirements for approval of breath measurement devices in the State of Illinois relies on Federal Regulation regarding approval of the devices as set forth in 49 Fed. Reg. 48,854, 48,854-72 (1984), or 58 Fed. Reg. 48,705, 48,705-10 (1993)). The Federal Department of Transportation usually publishes an updated Conforming Products List in March and September.

Information related to manufacturer's changes and modifications to evidential breath test instrument design can be obtained through a Freedom of Information Act request to the Office of Alcohol and State Programs (NTS-21), NHTSA, 400 Seventh St., SW, Washington, D.C., 20590. The party must

equipment does not insure its accuracy and reliability under actual testing conditions. Certification only establishes minimum performance criteria and standards."¹³⁶ The federal government establishes minimum performance requirements for uniformity based upon laboratory bench testing of the individual unit and model.¹³⁷ The legislature has only approved the underlying theory of BrAC determination and application through use of specific breath alcohol machines.¹³⁸ Unless a proper foundation for admission is created, including the condition of the breath machine and adherence to proper procedures for calibration and analysis, etc.,¹³⁹ the BrAC test result is inadmissible.

VII. DISCOVERY AS BASIS FOR EXPERT WITNESS TESTIMONY

Most state supreme courts provide for full discovery for the accused in criminal cases. The legislature in Illinois, for example, provides that the state must disclose chemical test requirements such that "in civil and criminal proceedings *full information* concerning the test or tests *shall be made* available to the person or such person's attorney."¹⁴⁰

In drunk driving cases, the United States Supreme Court has affirmed that there is either a right of discovery or a right to

also request the "Notification of Changes in Evidential Breath Test Instrument Design" form submitted by the manufacturer.

For further information, contact Dr. James F. Frank, Office of Traffic Injury Control Programs, Impaired Driving Division (NTS-11), National Highway Traffic Safety Administration, 400 Seventh Street, S.W., Washington, D.C. 20590; Telephone: (202) 366-5593.

136. *Predominantly Popular*, *supra* note 120, at 38. See *Breath Alcohol Machines*, *supra* note 98, at 14. See generally MCCORMICK, *supra* note 30 (discussing the ideas and principles supporting the Doctrine of Completeness).

137. On September 17, 1993, NHTSA published a notice, 58 Fed. Reg. 48,705, 48,705-10 (1993), to amend the Model Specifications. The notice changed the alcohol concentration levels at which instruments are evaluated from 0.000, 0.050, 0.101, and 0.151 BAC to 0.000, 0.020, 0.040, 0.080, and 0.160 BAC; the notice also added a test for the presence of acetone, and expanded the definition of alcohol to include other low molecular weight alcohols, including methyl or isopropyl.

138. See, e.g., 625 ILL. COMP. STAT. ANN. 5/11-501.2 (West Supp. 1999) (providing definitions of driving under the influence of alcohol, drugs, or intoxicating compounds); ILL. ADMIN. CODE tit. 77, § 510.40 (1999) (discussing evidential instruments for analyzing the content of breath); *People v. Bobczyk*, 99 N.E.2d 567, 569 (Ill. App. Ct. 1951).

139. See *Seattle v. Peterson*, 693 P.2d 757, 759 (Wash. Ct. App. 1987) (holding that the court will not accept the accuracy of breath alcohol machines as a matter of judicial notice, but such accuracy must be established by the evidence); *State v. Lewis*, 736 P.2d 70, 73 (Haw. Ct. App. 1987) (holding that because the State failed to provide testimony on the accuracy of the breath alcohol machine, the appellate court could not decide on that issue).

140. 625 ILL. COMP. STAT. ANN. 5/11-501.2(a)(4) (West Supp. 1999) (emphasis added). See ILL. SUP. CT. R. 412.

alternative means to demonstrate a defendant's innocence when potentially exculpatory evidence is not available, especially with breath alcohol testing machines.¹⁴¹ In *California v. Trombetta*,¹⁴² the Supreme Court identified an issue that is inherent in all breath alcohol machine cases:

[t]he materiality of breath samples is directly related to the *reliability* of the Intoxilyzer itself. The degree to which preserved samples are material depends on how *reliable* the Intoxilyzer is. This correlation suggests that a more constitutional attack might be made on the sufficiency of the evidence underlying the State's case. *After all, if the Intoxilyzer were truly prone to erroneous readings, then the Intoxilyzer results without more might be insufficient to establish guilt beyond a reasonable doubt.*¹⁴³

The objective of the defense is to discredit, whenever possible, the accuracy of a breath alcohol machine through discovery and subsequent testimony by the defendant's own expert. There is an underlying assumption that scientific evidence is not irrefutable and an expert witness is a necessary medium to challenge the prosecution's evidence or to offer other evidence that could negate a defendant's guilt.¹⁴⁴ Anything less is a violation of the defendant's right to due process and a fair trial.

The Minnesota District Court of Hennepin County addressed the issue of legislative restrictions on discovery for implied consent hearings regarding drunk driving cases.¹⁴⁵ The trial court determined that legislative limitations on discovery - for example, breath alcohol machines - violate both the separation of powers doctrine (legislative/judicial) and defendant's right to procedural due process.¹⁴⁶ By implication, this reasoning could be extended to

141. See *California v. Trombetta*, 467 U.S. 479, 490 (1984) (reasoning that more issues than the standard issue of breath alcohol preservation may be raised to demonstrate the inaccuracy of a breath alcohol machine's results).

142. *Id.*

143. *Id.* at 489 n.10 (emphasis added).

144. See *Breath Alcohol Machines*, *supra* note 98, at 30-31 (arguing that although there is a legislative presumption that breath alcohol machines are accurate, this presumption is not shared by the scientific community).

145. *Mooty v. Commissioner of Pub. Safety*, No. IC-476-166 (Fourth Judicial District, Hennepin County, Minn., Apr. 4, 1999) (Order and Memorandum of Law entered) (Peter B. Wold representing the Defendant).

146. *Mooty v. Commissioner of Pub. Safety* addressed limitations of discovery in drunk driving cases during implied consent proceedings and held the 1997 Amendments to MINN. STAT. § 169.123(5c) (1997) violated the separation of powers doctrine and MINN. STAT. § 169.123(5c)(d) violated procedural due process. No. IC-476-166 (Fourth Judicial District, Hennepin County, Minn., Apr. 4, 1999).

Permitting representation by counsel, then hindering counsel with limited information with which to represent the client, may render counsel ineffective (for example, using new model of Intoxilyzer). Also, defendants in drunk driving cases can be adversely affected by the unavailability of discovery to

include the right to independently inspect and test breath alcohol machines.

VIII. PER SE CHARGE CASE STRATEGY AND APPRAISAL

Expert witness testimony is essential to establishing an effective defense against the per se drunk driving charge. "The per se drunk driving charge is based solely upon scientific evidence produced by breath alcohol testing equipment of breath alcohol concentration. The breath test result is only relevant as to circumstantial evidence of intoxication."¹⁴⁷ Therefore, the BrAC value is not conclusive of absolute guilt, and is subject to collateral attack.¹⁴⁸

The prosecution usually relies entirely on the breath test result to prove each element of the charge. Therefore, even minimally probative defense rebuttal testimony can generate the reasonable doubt necessary to obtain an acquittal. Simply stated, the prosecution cannot afford to have the breath alcohol machine's mythical infallibility¹⁴⁹ debunked and lose its case. Establishment of any significant doubt regarding the reliability of the prosecution's scientific evidence satisfies any question of materiality. Expert witness testimony is both constitutionally relevant and material under the Due Process Clause of the Sixth Amendment in per se drunk driving cases.¹⁵⁰

IX. MONTHLY CALIBRATION AND RECERTIFICATION PROCESS

Calibration and testing (recertification) of breath alcohol

demonstrate that the breath alcohol machine (Intoxilyzer) was not operating properly or that the breath test was flawed.

147. *Predominantly Popular*, *supra* note 120, at 38 & n.9. See *Denison v. Anchorage*, 630 P.2d 1001, 1003 (Alaska Ct. App. 1981) (holding that the court cannot prevent the defendant in drunk driving case from presenting evidence that breath alcohol machine or operator error or some other factor besides consumption of alcohol accounted for the breath test result); *State v. Lowther*, 740 P.2d 1017, 1020 (Haw. Ct. App. 1987) (finding that breath alcohol machine test results are assailable); *People v. Bryant*, 499 N.E.2d 413, 418 (Ill. 1986) (discussing the differences between direct and circumstantial evidence); *People v. Alvarez*, 515 N.E.2d 898 (N.Y. 1987) (holding that a positive breath alcohol test result is only prima facie evidence of drunk driving and not per se evidence of guilt).

148. *Predominantly Popular*, *supra* note 120, at 38. See *Crane v. Kentucky*, 476 U.S. 683, 690 (1986) (stating "the opportunity to be heard . . . would be an empty one if the state were permitted to exclude competent, reliable evidence . . . central to defendant's claim of innocence").

149. The breath alcohol machine has been given an aura of "mythical infallibility" whose shortcomings and limitations are unlikely to be made known to the jury. *Breath Alcohol Machines*, *supra* note 98, at 30; Gil Sapir & Richard Kling, *Cross-Examination of Breath Alcohol Machine Operators*, 13 S. ILL. U. L.J. 83, 83 (1988) [hereinafter *Cross-Examination*].

150. *Recognition of an Accused's Constitutional Right*, *supra* note 43, at 74.

machines do not make the results presumptively accurate; they only provide a permissible inference of accuracy.¹⁵¹ The Authentication Doctrine is a prerequisite to reliability.¹⁵² The proponent of an item of evidence or ultimate fact must prove that the item is what it is claimed to be.¹⁵³ Neither professed judicial notice nor presumptive legislative approval renders the test result unassailable.

Calibration is a mechanical tune-up that returns the unit to operational specifications—nothing more. The breath alcohol machine's accuracy is dependent on inherent design limitations. The fact that a machine functions mechanically does not mean that the machine provides accurate results.¹⁵⁴ Furthermore, the court cannot take judicial notice of an industrial tolerance of 0.10% for recertification of equipment.¹⁵⁵ The equipment's design and tolerances are independent of appropriate calibration procedures, maintenance, and use. Therefore, an expert witness is necessary to establish the accuracy of the machine, to rely upon a theory of "industrial tolerance," and present other scientific issues.¹⁵⁶

The mere fact a breath alcohol machine is periodically examined and certified through its recertification process does *not* authenticate the reliability and credibility of its contents.¹⁵⁷ The

151. See *Commonwealth v. Sloan*, 607 A.2d 285, 293-94 (Pa. Super. Ct. 1992) (testing the accuracy of breath testing equipment is only evidence that equipment was tested); *Breath Alcohol Machines*, *supra* note 98, at 14; Kurt M. Dubowski, *Quality Assurance in Breath-Alcohol Analysis*, 18 J. ANALYTICAL TOXICOLOGY 306, 306 (1994). It is noteworthy that most states and governmental agencies do not have statutory requirements and proper scientific protocols for calibration and maintenance standards for preliminary breath testing (screening) devices (PBT) and calibrating units (wet bath simulators and dry gas). See also Model Specifications for Screening Devices to Measure Alcohol in Bodily Fluids, 59 Fed. Reg. 39,382 (1994); Conforming Products List of Screening Devices to Measure Alcohol in Bodily Fluids, 60 Fed. Reg. 42,214 (1995). Therefore, if the PBT or calibrating device are not properly maintained and calibrated, the evidential test results are neither credible nor reliable.

152. See *IMWINKELRIED & GARLAND*, *supra* note 26, § 6-4 (stating "the authentication doctrine is a requirement that the proponent of an item of evidence prove that it is what she claims that it is").

153. *Id.*

154. *State v. Rolison*, 133 P.2d 326, 329 (Haw. Ct. App. 1987).

155. See *People v. Davis*, 133 P.2d 172, 176 (Ill. App. Ct. 1989) (finding that the trial court's judicial notice of industrial tolerance levels was improper).

156. *Id.*

157. See generally BARBARA J. BASTEYNS, *MEDICOLEGAL ASPECTS OF ALCOHOL* ch. 10 (James C. Garriott, 3d ed. 1996) (discussing laboratory quality assurance programs). See also Gil Sapir & Mark Giangrande, *Alcohol Test Program Survey: State's Make Candid Comments About Themselves*, *DWI J.L. & SCI.*, Oct. 1995, at 5; Gil Sapir, *Flaking or Flaky: CMI's Intoxilyzer Model 5000*, *DRINKING DRIVING L. LETTER*, Nov. 1995, at 345 [hereinafter *Flaking or Flaky*]; Dubowski, *supra* note 151, at 306.

degree to which adjustments are made and parts are changed or repaired can render the value of test results between calibrations suspect.¹⁵⁸ A statement of calibration following repairs and adjustments on the breath alcohol machine is not an adequate demonstration of prior accuracy and operability of the machine.¹⁵⁹ Furthermore, "records [can be] in error, and they deserve no special presumption of credibility as compared to opposing testimony of a witness."¹⁶⁰

Most state legislatures or state administrative agencies have defined alcohol as ethanol or ethyl alcohol.¹⁶¹ The breath alcohol machine is calibrated within a range to react only to ethanol. Yet, calibration merely means that the machine is within tolerance specifications as defined by the manufacturer. This does *not* mean that the machine can accurately detect a level of ethanol exclusively, or that it cannot react in the presence of other alcohol-like compounds that may also be present.¹⁶² Therefore, claiming the calibrated breath alcohol machine is "accurate," "calibrated accurate," or "certified accurate" is a misnomer.¹⁶³ Misinformation regarding the breath alcohol machine is worse than no information at all. Accuracy of the machine is independent of calibration. The mechanical readjustment of the breath alcohol machine (calibration) cannot compensate or change its inherent design limitations (accuracy).

158. Cf. *People v. Schaefer*, 516 N.Y.S.2d 391, 394 (N.Y. Crim. Ct. 1987) (discussing a case where a frequently used breath alcohol machine had not been calibrated for six months and that the machine was left on by the operators).

159. See *id.* (finding that it would be more helpful to the court if the breath alcohol machine's accuracy was certified before any calibrations and adjustments were made and not afterward).

160. *Nowakowski v. Hoppe Tire Co.*, 349 N.E.2d 578, 582 (Ill. App. Ct. 1976). See *Smith v. Department of Prof. Reg.*, 559 N.E.2d 884, 887 (Ill. App. Ct. 1990) (finding that business records can be in error and thus do not deserve a presumption of credibility).

161. See, e.g., ILL. ADMIN. CODE tit. 77, § 510.20 (1999) (defining alcohol). The Federal Regulations however, define alcohol as "the intoxicating agent in beverage alcohol, ethyl alcohol or other low molecular weight alcohols including methyl or isopropyl alcohol. . . . Alcohol use means the consumption of any beverage, mixture, or preparation, including any medication, containing alcohol." 49 C.F.R. § 199.205 (1995).

162. See Jonathan P. Caldwell & Nick D. Kim, *The Response of the Intoxilyzer 5000 to Five Potential Interfering Substances*, 42 J. FORENSIC SCI. 180, 180 (1997) (arguing that other substances in exhaled air could interfere with the accuracy of breath alcohol machines); *Flaking or Flaky*, *supra* note 157, at 345; Alan W. Jones, *Observations on the Specificity of Breath-Alcohol Analyzers Used for Clinical and Medicolegal Purposes*, 34 J. FORENSIC SCI. 842, 842 (1989). See also *Breath Alcohol Machines*, *supra* note 98, at 7 (arguing that breath alcohol machines are neither accurate or precise).

163. See *Breath Alcohol Machines*, *supra* note 98, at 14. "The breath alcohol analysis ticket must be read and explained in its entirety before the result can be properly understood." *Id.* at 7.

If any modifications are made to the breath alcohol machine after its initial state governmental agency approval, the breath alcohol machine must be resubmitted to the state agency for subsequent retesting and approval, or else the test results are inadmissible.¹⁶⁴ A complete, documented, historical perspective on the individual breath alcohol machine, from the date of manufacture to the date of trial, is necessary for insight into the care, maintenance, repairs, testing, upgrades, recall compliance, use, problems, etc., of each unit. Because breath alcohol machines typically do not have documentation showing any modifications or changes, it is assumed that the individual breath alcohol machine is the same uniform model that was approved for use in the purchasing state. The history of a breath alcohol machine cannot be viewed in an isolated context, for example, thirty to sixty days, especially when compliance with manufacturer and operational standards are sought.¹⁶⁵

X. ROLE OF THE EXPERT WITNESS

The attorney-client privilege¹⁶⁶ is designed to protect confidential communications between a client and his or her attorney.¹⁶⁷ It is essential that the attorney maintain work product confidentiality,¹⁶⁸ provide all case materials, and discuss problem areas with the consulting and testimonial experts. This privilege extends to expert witnesses the attorney engages on behalf of the client.

An expert¹⁶⁹ may be used in two different capacities—for

164. See *State v. Flood*, 523 So. 2d 1180, 1181-82 (Fla. Dist. Ct. App. 1988) (holding that modifications require recertification). See also *State v. Baldwin*, 569 N.W.2d 37, 38 (Wis. Ct. App. 1997) *reversed*, 576 N.W.2d 904 (Wis. 1998) for further discussion.

165. See *People v. Schafer*, 516 N.Y.S.2d 391, 394 (1987) (finding that the storage and use of a breath alcohol machine sheds doubt on the machine's accuracy). In *McKim v. Arkansas*, 753 S.W.2d 295, 297 (Ark. Ct. App. 1988), the trial court ruled, "[w]e are not going through all of this. If we open the door to this, every DWI case in the State would take three days. The machine is certified and its operator is certified. That is as far as you may go . . ." *Id.* The Arkansas Appellate Court held that it was reversible error to deny relevant evidence of inaccuracy and unreliability including: repair, maintenance, suspension of machine's certification, logging of every test, complete disclosure of all records, and reprimands by governmental agencies for abusing established administrative procedures. *Id.* at 298.

166. See MCCORMICK, *supra* note 30, §§ 87-97 (discussing the privileged communications between client and lawyer).

167. See *id.* (defining the privilege).

168. Confidentiality is especially important when information is transmitted through non-encrypted electronic mail (e-mail), which is neither a privileged nor confidential communication. John W. Hall, *E-Mail and Confidentiality*, CHAMPION, June 1997, at 52, 52. See *ACLU v. Reno*, 929 F. Supp. 824, 830-38 (E.D. Pa. 1996) (discussing the open and decentralized nature of the Internet).

169. "An 'expert' in any field is someone whose qualifications we defer to

consultation or for testimony.¹⁷⁰ A consulting expert is a person who has been retained or specifically employed in anticipation of litigation or preparation of trial, but who is not to be called at trial.¹⁷¹ The identity, theories, mental impressions, litigation plans, and opinions of a consultant are work product and protected by the attorney-client privilege.

A testimonial expert is retained for purposes of testifying at trial. The confidentiality privilege is waived and all materials, notes, reports, and opinions must be produced through applicable discovery proceedings.¹⁷² If an expert relies on work product or hearsay as a basis for his or her opinion, that material must be disclosed and produced through discovery.¹⁷³

The expert witness performs two primary functions: (1) the scientific function—collecting, testing, and evaluating evidence, and forming an opinion as to that evidence,¹⁷⁴ and (2) the forensic function—communicating that opinion and its basis to the judge and jury. A general rule of evidence is that witnesses may only testify to what they have personally observed or encountered through their five senses.¹⁷⁵

The expert balances validity of the analytical method versus testimonial simplicity.¹⁷⁶ The purpose of a forensic test, however, is not to identify an item or result, but to convince a jury that the item or result has been identified. While the goal of a scientist is truth, the goal of a forensic analyst is persuasion.¹⁷⁷

Expert witnesses are arguably “conduits of hearsay and other

when he seems to confirm our prior judgment and whose credentials we impugn when he rejects our judgment.” Sydney J. Harris, *And in Today's News—Some of Yesterday's Olds*, CHI. SUN-TIMES, Nov. 26, 1983 at 19.

170. GIANNELLI & IMWINKELRIED, *supra* note 43, §§ 5-10, 5-11.

171. *Id.*

172. *Id.*

173. Additionally, “a criminal defendant must . . . have access to the hearsay information relied upon by an expert witness. Without such access, effective cross examination would be impossible.” *United States v. Lawson*, 653 F.2d 299, 302 (7th Cir. 1981). Also, exhibits containing inadmissible hearsay may not be admitted into evidence even though relied upon by an expert in formulating an opinion. *Id.* However, the expert may still disclose the hearsay in testifying to the “facts and data” underlying the opinion, provided that such hearsay was previously disclosed prior to testimony. *Id.*

174. An expert’s opinion is all too often based upon misconceptions, warped notions, false prophecies, half-truths, delusions, folly, oversimplifications, humbug, errors, lies, distortions, gaffes, sophistry, and fallacies. Experts have the ability to speak with the complete confidence of total ignorance. It is also not uncommon for experts in the fervor of intellectual conflict and controversy to routinely quote each other out of context.

175. MCCORMICK, *supra* note 30, § 10.

176. James M. Shellow, *The Application of Daubert to the Identification of Drugs*, 2 SHEPARD’S EXPERT AND SCI. EVID. Q. 593, 600-01 (1995).

177. *Id.* at 602.

unreliable evidence.”¹⁷⁸ Generally, witnesses are not allowed to testify to their opinions, with several specific exceptions.¹⁷⁹ One of these exceptions is the testimony of the expert witness, a witness whose opinion “will probably aid the trier of fact in the search for the truth.”¹⁸⁰ The expert may testify to ultimate issues, which are mixed questions of law and fact.¹⁸¹ However, the expert may not give an opinion or state a legal conclusion regarding a question of law that is to be decided by the court.¹⁸² Further, an expert witness’ opinions cannot be couched as possibilities or probabilities.¹⁸³ “Whether a witness is qualified as an expert can only be determined by comparing the area in which the witness has expertise with the subject matter of the witness’s testimony.”¹⁸⁴

An attorney is prohibited from vouching for the credibility or truthfulness of any witness, including an expert witness.¹⁸⁵ Witness credibility cannot be bolstered by having a prosecutor or a prosecution’s expert witness express a personal belief that the witness has provided truthful information nor by vouching for the witness’ truthfulness in any other matter.¹⁸⁶ This prohibition is especially important in summation arguments.¹⁸⁷

XI. EXPERT WITNESS: ETHICS AND INTELLECTUAL HONESTY

Ethics and scientific testimony are inextricably intertwined, because science is neutral and based upon facts. Intellectual honesty is an issue in scientific evidence. An expert witness can

178. Christopher P. Murphy, *Experts, Liars, and Guns for Hire: A Different Perspective on the Qualification of Technical Expert Witnesses*, 69 IND. L.J. 637, 637 (1993); L. Timothy Perrin, *Expert Witness Testimony: Back to the Future*, 29 U. RICH. L. REV. 1389, 1401 (1995).

179. MCCORMICK, *supra* note 30, at § 10. See FED. R. EVID. 701-06.

180. *Jenkins v. United States*, 307 F.2d 637, 643 (D.C. Cir. 1962).

181. *Puente v. A.S.I. Signs*, 821 S.W.2d 400, 402 (Tex. Ct. App. 1991).

182. *Id.*; *Harvey v. Culpepper*, 801 S.W.2d 596, 601 (Tex. Ct. App. 1990).

183. See generally *Hall v. Baxter Healthcare Corp.*, 947 F. Supp. 1387, 1407 (D. Or. 1996).

184. Margaret A. Berger, *Procedure and Evidentiary Mechanisms for Dealing with Experts in Toxic Tort Litigation: A Critique and Proposal*, Consultant Report for the Carnegie Commission on Science, Technology and Government, at 15 (1991) [hereinafter *Procedure and Evidentiary Mechanisms*].

185. Barry Tarlow, *Expert Witnesses and Prosecutorial Vouching: New Frontiers in “Soft Expert” Testimony*, CHAMPION, Sept./Oct. 1997, at 50. “It is unprofessional conduct for the prosecutor to express his or her personal belief or opinion as to the truth or falsity of any testimony or evidence or guilt of the defendant.” A.B.A. STANDARDS FOR CRIMINAL JUSTICE Standard 3-5.8(b)(80) (3d ed. 1992).

186. *Berger v. United States*, 295 U.S. 78, 88 (1934). See *United States v. Modica*, 663 F.2d 1173, 1178-79 (2d Cir. 1981) (describing the prosecutor’s improper use of his own opinions in a summation).

187. *Modica*, 663 F.2d at 1178-79.

effect, affect, and infect the evidence. The integrity of scientific evidence can affect the outcome of judicial proceedings. Ideological and personal beliefs can prejudice an expert witness' testimony.

Jurors regularly accord special weight to expert witness testimony. Judges and attorneys customarily believe jurors give more credibility to scientific evidence than other types of evidence. Jurors normally believe the case would have been decided differently without forensic evidence. Expert witness testimony is the most persuasive of all testimony.¹⁸⁸

Generally, the prevalent problems with forensic experts are honesty, competency, quality of work, and neutrality.¹⁸⁹ Forensic scientists must be independent, neutral witnesses, even if the government employs them. The ethical conduct of experts is a serious issue confronting the judicial system.

Experts' abuse of scientific evidence focuses on lying about credentials, submitting false laboratory reports, presenting misleading testimony, and presenting biased testimony.¹⁹⁰ Error, overstatement, or fraud by expert witnesses can often be exposed by careful examination and independent testing, regardless of the scientific evidence being used.

In *Daubert v. Merrell Dow Pharm., Inc.*, the Court, when discussing the tenets of good science, did not address the dishonest and unethical forensic expert who participates in evidence-shaping and how it can affect the outcome of judicial proceedings.¹⁹¹ Evidence-shaping is a colloquialism for selective testing, selective reporting, biased interpretation, overstating the significance of test results, ignoring or withholding results inconsistent with a biased viewpoint, inappropriate collection, testing of evidence, and fabrication of data.¹⁹²

Evidence-shaping incorporates bias, intellectual dishonesty, and fraud by the expert witness. It also involves performances, interpretation, and presentation of science deliberately designed to favor a particular viewpoint.¹⁹³ Fraud is not self-correcting. It is

188. *Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579, 595 (1993) (quoting Weinstein, J., 138 F.R.D. 631, 632 (1991)).

189. "[J]uries are increasingly making determinations on the credibility of a forensic scientist's evidence, not on scientific fact, but how it is presented." Michael A. Peat, *Guest Editorial*, 42 J. FORENSIC SCI. 775, 775 (1997). See Michael H. Graham, *Expert Witness Testimony and the Federal Rules of Evidence: Insuring Adequate Assurance of Trustworthiness*, 1986 U. ILL. L. REV. 43, 45-47 (1986).

190. See generally Giannelli, *supra* note 27, at 439-441.

191. 509 U.S. 579 (1993). See *Kumho Tire Co., v. Carmichael*, 119 S. Ct. 1167 (1999); *General Elec. Co. v. Joiner*, 522 U.S. 136, 141 (1997).

192. Stanley G. Schneider & Kevin D. Ballard, *Convincing But Erroneous: The Courtroom Impact of Evidence Shaping*, Proceedings of the American Academy of Forensic Sciences, Feb. 1998, at 119.

193. Alan H.B. Wu et al., *Minimal Standards for the Performance and Interpretation of Toxicology Tests in Legal Proceedings*, 44 J. FORENSIC SCI.

perpetuated 1) by laboratory managers that defer to a subordinate's intelligence, 2) because the laboratory work conforms to a prevailing view, and 3) because the laboratory is supported by a prestigious institution. If the courts and attorneys were scientifically aware, there may be less temptation for forensic scientists to skim the truth in their testing and testimony.¹⁸⁴ Evidence-shaping can and does result in gross miscarriages of justice through the presentation of convincing, but false, scientific testimony.¹⁸⁵

XII. EXPERT WITNESS QUALIFICATIONS AND VOIR DIRE

The moving party must establish the expert's competency and knowledge in the profession and field (*not* experience, education or specialized training), subject to judicial approval, through examination of the expert's credentials.¹⁸⁶ The review process is conducted through a voir dire examination.¹⁸⁷ A witness is not

516, 521 (1999). "Witnesses should ensure that their opinions are congruent with current scientific standards, and not be manipulated into extending their testimony to support a particular side of a case." *Id.*

194. See generally John E. Murray, *Conference Proceedings: Science and the Law*, 34 DUQ. L. REV. 795, 795-812 (1996); James E. Starrs, *Recent Developments in Federal and State Rules Pertaining to Medical and Scientific Expert Testimony*, 34 DUQ. L. REV. 813, 813-47 (1996) [hereinafter *Recent Developments*]; Giannelli, *supra* note 27, at 439-441; *Seamy Side*, *supra* note 27, at 7; Castelle, *supra* note 27, at 12, 14; *Judicial Control*, *supra* note 27; Andre A. Moenssens, *Novel Scientific Evidence in Criminal Cases: Some Words of Caution*, 84 J. CRIM. L. & CRIMINOLOGY 1, 6 (1993).

195. Schneider & Ballard, *supra* note 192, at 119. See generally Murray, *supra* note 194, at 795-812; *Recent Developments*, *supra* note 194, 813-47. See also Starrs, *supra* note 17, at 15 (introducing the concept of skimming the truth).

Paul C. Giannelli provides an insightful review of prominent incidents regarding egregious abuses of expert witness testimony in forensic science which notably include, serologist Fred Zain, pathologist Dr. Ralph Erdmann, dentist Dr. Michael West ("West Phenomena"), anthropologist Dr. Louise Robbins ("Cinderella Expert"), the Guildford Four and Maguire Seven (Irish Republican Army cases), serologist Timothy Dixon (Gary Dotson DNA case) and other notable cases with abhorrent consequences. See generally Giannelli, *supra* note 27; *Seamy Side*, *supra* note 27; *Judicial Control*, *supra* note 27; Moenssens, *supra* note 194.

196. FEDERAL JUDICIAL CENTER, *supra* note 14, at 1, 5. The Federal Judicial Center prepared its REFERENCE MANUAL ON SCIENTIFIC EVIDENCE in attempt to assist judges and all parties involved with litigation in managing expert evidence, primarily in cases involving issues of science or technology. *Id.* at 1.

197. "Voir dire" is from the French language meaning "to speak the truth." NICHOLAS T. KUZMACK, 1 FORENSIC SCIENCE HANDBOOK 6 n.15 (Richard Saferstein ed., 1982). The term is used in two contexts relating to trials: first, the prospective jury is voir dired by the attorneys to determine their qualifications; second, after the proponent of an expert witness asks questions of the witness to bring out his/her qualifications, the opposing attorney is allowed to voir dire the witness to bring out matters that might prevent his qualification as an expert. *Id.*

deemed an expert until the court qualifies him as such.

Voir dire creates the standard for an expert witness' testimony and credibility.¹⁹⁸ It is the first part of any examination process. Neither the movant¹⁹⁹ nor the witness may take voir dire for granted, or the proffered witness will not be considered properly qualified. Whether a witness is qualified as an expert can only be determined by comparing the area in which the witness has expertise with the subject matter of the witness' testimony.²⁰⁰

"Lawyers rarely do more than minimally review the qualifications of the expert and verify the facts on which the expert's conclusions are based."²⁰¹ The voir dire examination is typically based upon perfunctory questioning about institutional affiliation and publications. "The reason for this limited inquiry is simple: most lawyers and judges lack the adequate scientific background to argue or decide the admissibility of expert testimony."²⁰²

The imprimatur of a governmental agency, laboratory, office, or title does not automatically make either the results or witness' testimony inherently trustworthy, credible, or reliable.²⁰³ A witness is not an expert merely because a term is part of their title or job description, for example, Special Agent (FBI) or Drug Recognition Expert. The name "special," "expert," or "inspector" itself gives an instantaneous indicia and aura of authority and respect, which implies a specific expertise beyond normal employment (law enforcement/police) qualifications to the trier of fact.²⁰⁴

198. Gil Sapor, *Proper Voir Dire: Qualifying the Expert Witness*, DWI J.L. SCI., Dec. 1998, at 5, 5.

199. The Authors use "movant" as a generic term for the proponent of the voir dire and witness.

200. *Procedure and Evidentiary Mechanisms*, *supra* note 184, at 15.

201. Neufeld & Colman, *supra* note 7, at 49.

202. *Id.*

203. The principal findings and recommendations of the Justice Department's report addressed "significant instances of testimonial errors, substandard analytical work, and deficient practices" including policies by the Federal Bureau of Investigation Laboratory. *Justice Department Investigation of FBI Laboratory: Executive Summary*, 61 CRIME L. (BNA) 2017 (1997). "The [517-page Inspector General's] report provided plentiful evidence of pro prosecution bias, false testimony and inadequate forensic work No defense lawyer in the country is going to take what the FBI says at face value anymore. For years they were trusted on the basis of glossy advertising." JOHN F. KELLY & PHILLIP K. WEARNE, *TAINTING EVIDENCE: INSIDE THE SCANDALS AT THE FBI CRIME LAB* 3-4 (1998).

204. Police officers may also call themselves drug recognition specialists, technicians, and evaluators. Vanell, *What's in a Name?*, DRE (NEWSLETTER), Sept/Oct 1990, at 2.

In this same issue of the DRE, it is stated that the International Association of Chiefs of Police (IACP) will use the term "technician." On

An expert may be qualified, but not competent, to render a credible opinion.

In trial harm to litigants results from improper qualification of an incompetent expert or failure to qualify a competent expert. . . . The incompetent expert is a vehicle for unreliable proof, while the later denies the opportunity to present credible evidence.²⁰⁵

In bolstering the credibility of an expert witness, attorneys will select as circumstances allow, witnesses with significant trial experience. Absent such a source, attorneys select from the community rather than classified advertisements. Trial tactics rather than reliability becomes the impetus for the selection of experts. Such tactics may influence selection of the less reliable witness.²⁰⁶

The more difficult issues arise when the proffered expert's knowledge stems completely from a literature search after engagement by the attorney. This "second-hand expert" understands the general principles and relevant theory without actual expertise, personal knowledge, or research regarding the controverted issue.²⁰⁷ The quandary with using a second-hand expert is that the trier of fact relies on the expert's credibility rather than his expertise.²⁰⁸ Therefore, an integral question is whether the expert is testifying about matters directly derived from research, or has developed opinions expressly for the purpose of testifying.²⁰⁹ The trial judge should constantly question:

[d]oes the proffered witness have sufficient information, based upon the evidence in this case, to render a reliable opinion? Courts should remember that they need not - and should not - accept an expert's opinion on the basis of ipse dixit, i.e., such a thing is so because I say it is so.²¹⁰

Expert witness discovery relating to scientific evidence and associated testimony is controlled in part by the *Federal Rules of*

March 25, 1992, the Technical Advisory panel (to the IACP Highway Safety Advisory Committee) voted to change and use the self-proclaimed term "Drug Recognition Expert" (DRE) thereafter. DRE (NEWSLETTER), Mar./Apr. 1992, at 10. The term "expert" is currently used in the latest training materials. Kennedy, *supra* note 23, at 13. If DREs call themselves experts, it is problematic.

205. Murphy, *supra* note 178, at 649.

206. *Id.* at 650-51. See Perrin, *supra* note 178, at 1415-20.

207. MARGARET BERGER, FEDERAL JUDICIAL CENTER, EVIDENTIARY FRAMEWORK, REFERENCE MANUAL ON SCIENTIFIC EVIDENCE 62 (1994).

208. *Procedure and Evidentiary Mechanisms*, *supra* note 184, at 16-17.

209. Huey v. United Parcel Serv., Inc., 165 F.3d 1084, 1086 (7th Cir. 1999); Hall v. Baxter Healthcare Corp., 947 F. Supp. 1387, 1396 (D. Or. 1996).

210. Harris v. Cropmate Co., 706 N.E.2d 55, 64-65 (Ill. App. Ct. 1999). See *Recognition of an Accused's Constitutional Right*, *supra* note 43, at 84.

Civil Procedure,²¹¹ *Daubert v. Merrell Dow Pharm., Inc.*,²¹² state statutes, and local court rules. According to *Federal Rule of Civil Procedure* 26(a)(2)(B), before an expert witness can offer testimony, that person must provide a written summary opinion discussing the testimonial subject matter, substance of facts and opinion, basis for opinion, reports, a list of all publications authored by the witness in preceding ten years, a record of all previous testimony including depositions for the last four years, disclosure statement,²¹³ and a report signed by the expert's disclosing attorney. Once disclosure of the expert witness is conducted, under *Federal Rule of Civil Procedure* 26(e)(1), a continuing duty exists to provide additional and *corrective* information.²¹⁴ The movant must provide complete, current information about the expert witness.

XIII. PROSECUTION'S EXPERT WITNESS

"Too many experts in the criminal justice system manifest a police-prosecution bias."²¹⁵ "A willingness exists to shade and distort opinions to support the state's case."²¹⁶ "Similarly, too many prosecutors seek out such experts."²¹⁷ The government's expert will present testimony regarding the efficacy of breath alcohol testing equipment. Seldom will either the government or its expert witness discuss the limitations and problems with breath alcohol testing procedures, equipment, and the prosecution's case.

The major spheres of expert witness examination are motive, interest, bias, opinion testimony,²¹⁸ fallibility of methodology and

211. FED. R. CIV. P. 26(a)(2)(A), (B), (C).

212. 509 U.S. 579 (1993).

213. FED. R. CIV. P. 26(a)(2)(B). "The expert witness disclosure statement should generally include the following information regarding the expert: qualifications; scope of engagement; information relied upon in formulating opinion; summary of opinion; qualifications and publications; compensation; and signature of both expert and disclosing attorney." *Id.*

Even though many states have adopted the FEDERAL RULES OF CIVIL PROCEDURE, including Rule 26, parties should consult their own jurisdiction regarding rules of discovery and corresponding requirements.

214. FED. R. CIV. P. 26(e)(1). Additional relevant Federal Rules of Evidence are 702 (testimony by experts), 703 (bases of opinion by experts), and 705 (disclosure of facts or data underlying expert opinion. FED. R. EVID. 702, 703, 705.

215. Giannelli, *supra* note 27, at 441.

216. *Id.* See *Judicial Control*, *supra* note 27, at 234; *Seamy Side*, *supra* note 27, at 7; Moenssens, *supra* note 194, at 6.

217. Giannelli, *supra* note 27, at 441. Expert witnesses are too often subjected to intense pressure from the prosecution to bolster the government's case and to testify to immutable and infallible facts. *Judicial Control*, *supra* note 27, at 250.

218. Regarding opinions, it must be noted that there are experts with

result,²¹⁹ reproducibility of results, and integrity. The prosecution's expert witness is routinely the calibrator/field inspector from either the state administrative or law enforcement agency responsible for the breath alcohol machine. They possess no other license than that of a breath alcohol machine operator.²²⁰ The designation of calibrator/field inspector is an intra-departmental title based upon "desirable" job requirements.²²¹ The prosecution's expert witness is normally a governmental employee with a job description requiring them to "[p]rovide direct assistance to State's Attorneys with preparation of data and evidence for prosecution of cases; provide expert testimony in court as to the precision and accuracy of breath testing instruments and the administration of same."²²²

Seldom does the calibrator/field inspector possess expert witness credentials expected of other expert witnesses. The absence of publications, original research, advanced degrees and training is usually the norm, not the exception.

The calibration and maintenance of breath alcohol test equipment is determined by state administrative regulations.²²³ The calibrator/field inspector follows those regulations even though they may be contrary to the practices of good science. If current regulations required more or different tests, the calibrator would have to follow those procedures.

reasonable opinions in the area of expertise besides those of the testifying expert. Reasonable people can disagree with reasonable opinions; the expert witness is only offering his opinion, and nothing more. Additionally, reasonable people in the examined field of knowledge can differ. The witness has provided his opinion and nothing more.

219. Regarding fallibility, it must be noted that nothing is infallible. The question that is raised in this situation is whether the technique, procedure, methodology and equipment are infallible. A "yes" answer illustrates naiveté, narrow mindedness, and dogma. A "no" answer is reasonable doubt.

220. ILL. ADMIN. CODE tit. 77, §§ 510.20, 510.70 (1999).

221. *Breath Alcohol Machines*, *supra* note 98, at 19. See Illinois Department of Central Management Services Class Specification—Breath Alcohol Analysis Technician, spec. code 3150, position code 05170 (Apr. 1, 1985). Desirable requirements include a high school degree or equivalency, a Class A driver's license, and attendance at manufacturer's maintenance school. *Id.*

There are no requirements to attend refresher breath alcohol machine maintenance courses or recertification courses. *Id.* There are no educational requirements in instrumental analysis, chemistry, biomedical engineering, or any related science necessary to qualify as a calibrator/field inspector.

222. Illinois Dept. of Central Management Services Class Specification—Breath Alcohol Analysis Technician, spec. code 3150, position code 05170 (Apr. 1, 1985). *Cf.* Illinois State Police Directive, ENF-018, DUI Enforcement and Processing, Revised Sept. 14, 1999; Illinois State Police, Position No. 5524-Breath Alcohol Unit Supervisor, effective Aug. 1, 1998 (detailing the duties of Illinois State Troopers assigned to maintain breath alcohol testing equipment).

223. 625 ILL. COMP. STAT. ANN. 5/11-510.100 (West 1999).

The calibrator/field inspector is required to use the breath alcohol testing equipment issued by the government. He or she cannot request different or subsequently manufactured breath alcohol machines and simulators.²²⁴ The calibrator/field inspector does not personally know if the breath alcohol machine operator followed proper test procedures,²²⁵ and is limited to testifying about the equipment, not administration of the breath alcohol test.

These are some of the inherent problems with the prosecution's routine expert witness regarding the breath alcohol machine. Due to the calibrator/field inspector's requirement through his or her employment to testify on behalf of the prosecution, the state's expert witness has an apparent interest in the outcome of the trial. Also, if the testimony implies more than the test can determine (accuracy and reliability of breath alcohol machine); it is a basis for incompetency or advocacy. Clearly, expert testimony offered by the state's calibrator/field inspector may lack objectivity and impartiality, and as a result, may be prejudicial.

XIV. DEFENSE EXPERT WITNESS: APPLICABILITY AND RIGHTS

The breath alcohol test result, including its methodology and process, is essential to the prosecution's per se DUI case. Accordingly, the accused is entitled to rebut this critical evidence through use of an independent expert witness, which may include the inspection and testing of the breath alcohol equipment.

It is fiction that good attorneys do not need experts. Attorneys must work within their competency limitations and seek assistance from experts, especially in areas of scientific and expert evidence. Attorneys seldom feel comfortable or confident in their ability to obtain, interpret, and understand scientific information. Cross examination is *no* substitute for an expert. The examiner can only generate or neutralize specific facts, but *cannot* address general propositions. Attorney competency cannot replace an expert. Therefore, an expert is necessary to competently confront and rebut the breath alcohol test result and the related mythical infallibility of scientific evidence in a drunk driving case.

If the rebuttal testimony is critical and reliable, it is admissible, regardless of statutes or lower court rulings.²²⁶

224. State v. Flood, 523 So. 2d 1180, 1182 (Fla. Dist. Ct. App. 1988). See *Breath Alcohol Machines*, *supra* note 98, at 9 n.38.

225. See generally *Cross-Examination*, *supra* note 149.

226. Rock v. Arkansas, 483 U.S. 44, 55 (1987). See *Recognition of an Accused's Constitutional Right*, *supra* note 43, at 82-83 (discussing *Rock*). "[T]he Constitution guarantees criminal defendants a 'meaningful opportunity to present a complete defense.'" Crane v. Kentucky, 476 U.S. 683, 690 (1986) (quoting California v. Trombetta, 467 U.S. 485 (1984)).

Moreover, if rebuttal testimony is capable of generating a reasonable doubt, then it is admissible.²²⁷ The defendant has a constitutional right to present critical evidence. This right supersedes any statutory and common law application to the contrary.²²⁸

“Expert evidence can be both powerful and quite misleading because of the difficulty in evaluating it.”²²⁹ Therefore, the defendant’s expert witness should offer testimony addressing proper scientific standards and valid scientific process and procedures.²³⁰ This enables the jury to receive a holistic perspective on the practice of good science in drunk driving cases. However, if defense experts are being used to disprove the prosecution’s experts, then defense counsel must attempt to determine whose expert is better suited to resolve the issues presented. The question then becomes whose expert is more credible, believable, ethical, qualified, and knowledgeable.

All too often, the prosecution will object to the testimony of the defendant’s expert witness as unduly prejudicial, misleading, and confusing. In making these assertions, the prosecution is seeking to present un rebutted testimony that the breath alcohol test result is irrefutable. The prosecution cannot avoid addressing any scientific or factual deficiencies within the state’s breath alcohol testing program. Any contradictory evidence is prejudicial to the state’s position.²³¹ Therefore, defendant’s expert must be

The legislature cannot enact by fiat the automatic admissibility of evidence and then deny a person’s right of confrontation challenging that evidence. *Id.* See FED. R. EVID. 104(e) (stating that an admissibility decision does not limit the “right of a party to introduce before the jury evidence relevant to weight or credibility”).

227. See *Recognition of an Accused’s Constitutional Right*, *supra* note 43, at 81 (discussing *Crane*).

228. See *id.* (discussing *Olden v. Kentucky*, 488 U.S. 227 (1988), which held that, while a trial court may impose reasonable limits on defense counsel’s inquiry into the potential bias of a prosecution’s witness, the limitation is subject to harmless error analysis).

229. *Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579, 595 (1993) (quoting *Weinstein, J.*, 138 F.R.D. 631, 632 (1991)).

230. *Id.* See *Kumho Tire Co. v. Carmichael*, 119 S. Ct. 1167, 1176 (1999) (holding that the objective of *Daubert*’s gatekeeping requirement is to make certain that an expert witness employs the same level of intellectual rigor in the courtroom that characterizes the practice of an expert in the relevant field); *General Elec. Co. v. Joiner*, 522 U.S. 136, 141 (1997) (holding that the question of admissibility of expert testimony is reviewed under the abuse of discretion standard); *Huey v. United Parcel Serv., Inc.*, 165 F.3d 1084 (7th Cir. 1999) (holding that a “forensic vocational expert” did not qualify as an expert when he failed to explain what field of knowledge a professional in human resource development masters).

231. If not for a defense expert, a jury would never be told of a breath alcohol machine’s fallibility, unreliability and unsuitability. The prosecution will not inform the trier of fact of the inherent problems associated with a breath

permitted to testify regarding the breath alcohol machine and BrAC test result.

The prosecution's attempt to prevent the defendant's expert witness from testifying is usually based upon three unfounded assumptions. The first is that the breath alcohol machine is accurate and reliable due to approval by the legislature or administrative agency. The second is that the expert witness testimony will be used to urge the jury to disregard the breath test results even though the breath alcohol machine is approved by the state. The third is that the expert witness testimony is being offered without proper foundation. Each of these assertions as discussed in this Article are premised on pains of paranoia through the mythical infallibility of scientific evidence.²³²

The defense should present testimony regarding whether the machine and equipment used to measure the breath alcohol concentration were reliable (i.e., operation, maintenance, calibration, analysis, specificity, design, and associated incidence of error). For example, state regulations require the breath alcohol machine to identify "blood alcohol" and define alcohol as ethanol or ethyl alcohol.²³³ Therefore, testimony should be presented addressing whether the unit used is specific for ethanol to the exclusion of all other compounds as mandated by administrative regulations.

Additional defense testimony would address comparative improvements to show breath alcohol machine technology developments and lack of accuracy;²³⁴ interferences; contamination and operational malfunctions; "deficient/insufficient sample,"²³⁵

alcohol machine because evidence of that nature would damage the prosecution's case. Similarly, a car dealer will not inform a purchaser of actual and potential vehicle problems during the sale of a vehicle because any problems will adversely affect the car dealer's sale.

232. *Cross-Examination*, *supra* note 149, at 83.

233. ILL. ADMIN. CODE tit. 77, §§ 510.40, 510.2 (1999). The Federal Regulations, however, define alcohol as the intoxicating agent in beverage alcohol, ethyl alcohol or other low molecular weight alcohols including methyl or isopropyl alcohol. 49 C.F.R. § 199.205 (1998). "Alcohol use means the consumption of any beverage, mixture, or preparation, including any medication, containing alcohol." 49 C.F.R. § 199.205 (1998).

234. *Predominantly Popular*, *supra* note 120, at 38. See *People v. Capporelli*, 502 N.E.2d 11, 16 (1986) (holding that the fact that improvements were subsequently made on the breath alcohol machine used in the case were certainly relevant to prove that the model used was inaccurate).

235. See *Sherill v. Department of Transp.*, 799 P.2d 836, 843 (Ariz. 1990) (stating that a breath test reading indicating that samples were "deficient" did not establish a refusal to successfully complete the test); *State v. Barker*, 629 So. 2d 1119, 1120-21 (La. 1992) (holding that the use of a "deficient sample" test result for a per se statutory DUI prosecution does not satisfy the requirements of due process); *State v. Vannoy*, 866 P.2d 874, 877, 880 (Ariz. Ct. App. 1993) (holding that the state has an obligation to preserve a breath sample for independent testing, particularly when the prosecution relies on a

“low blow,” or “low volume” ambient air/fail readings,²³⁶ whether the person who administered the test followed scientifically acceptable procedures when the test was given; whether the physical condition of the defendant when the test was given caused the test results to be unreliable; whether scientifically acceptable procedures were followed in the calibration and maintenance of the machine and equipment; and whether those procedures were reliable. If not for a defense expert, the judge and jury would never be told of the machine’s fallibility, unreliability, and unsuitability.

The defendant’s expert witness is permitted to render an opinion on the breath alcohol machine. The trial court’s refusal to permit testimony of defendant’s expert witness is reversible error. In *State v. Hopkins*,²³⁷ testimony was offered to “cast doubt on the reliability of the scientific methodology underlying the design of the breath alcohol machine, as well as questioning whether the particular machine used here was functioning properly” and that the expert witness’ qualifications, regardless of direct experience, were sufficiently demonstrated to permit testimony. The *Hopkins* court held that it was reversible error to prevent testimony challenging the scientific hypothesis, physical theories of the breath alcohol machine, and its particular reliability.

If attorneys are prohibited from properly preparing their entire case,²³⁸ or if they routinely stipulate to chemical breath test results, the breath alcohol machine will be transformed into a police officer’s “dream machine,” whereby the officer pushes a button, administers a breath test, and the results become evidence of irrefutable guilt.

deficient sample for a per se charge).

236. See *Dorman v. Del Ponte*, 582 A.2d 473, 475-77 (Conn. Super. Ct. 1990) (holding that the prosecution must show that a motorist affirmatively refused to cooperate causing the breath alcohol machine to “low abort”); *State v. Giangrande*, 36 Fla. Supp. 2d 67, 69 (1989) (holding that a “low volume sample” indicates that a deficiency exists with deep lung air not being delivered to the Intoxilyzer Model 5000). Therefore, a legitimate question regarding the scientific reliability of the test results exists. *Id.* It is not a valid test. *Id.*; See also Richard Essen & Carlos Canet, *Challenging Low Sample Volume Results on the Intoxilyzer 5000*, DWI J.L. & SCI., Apr. 1994, at 8.

237. 747 P.2d 88, 89 (Idaho Ct. App. 1987).

238. The right to inspect and test breath alcohol machines is all too often denied under the following justifications: the legislature approves the equipment, the appropriate governmental agency maintains and certifies the equipment’s accuracy on a regular basis, the scientific community recognizes the proffered evidence, and *Daubert* is not appropriate. This reasoning is fallacious, frustrating, and generally based on public policy.

XV. SUMMARY

The legislature has criminalized the offense of operating a motor vehicle at a prescribed blood or breath alcohol level. The breath alcohol test result itself is not an element of the offense. It is merely evidence used to prove the commission of the crime. The government cannot immunize itself from rebuttal testimony on the breath test itself simply to protect its prosecutorial position. If the prosecution is permitted to rely on un rebutted scientific testimony, then the jury will over-evaluate that evidence. Exclusion of defense rebuttal testimony compounds this problem and injustice. The government is seeking to exclude relevant, material, and reliable defense testimony in order to perpetuate an unfair advantage. This type of advantage is both intolerable and unconstitutional.²³⁹

CONCLUSION

Defendants in per se drunk driving cases are charged with driving their vehicle with a BrAC level above the statutory intoxication limit. The government must not prosecute and convict on less than all of the evidence. The defendant has the right to receive full information regarding the test used as a basis for this allegation. Inherent in a defendant's discovery and confrontation rights is the unassailable right to present rebuttable testimony through use of an expert witness, including inspection and testing of the breath alcohol machine. Legislative approval of the breath alcohol machine and its monthly recertification does not supersede a person's right to a fair trial. A defendant's right of due process and confrontation may not be abridged for any reason.

239. *Recognition of an Accused's Constitutional Right*, *supra* note 43, at 87.

APPENDIX

FULL CASE CAPTION

DEFENDANT'S MOTION TO INSPECT AND TEST BREATH ALCOHOL MACHINE

(*Named Defendant*), through his/her attorney, (*Attorney's Name*), requests this Honorable Court enter an Order for inspection and independent testing of the breath alcohol machine used in this case. In support of this Motion, Defendant states the following:

1. Statement of Facts.
2. Defendant submitted to a breath alcohol test on a (*Make, Model, Serial Number*) with an alleged test result of ____% BrAC on (*Date*).
3. The prosecution relies entirely on the breath alcohol test result to prove each element of the charge. Therefore, even minimally probative defense rebuttal testimony can generate the reasonable doubt necessary to obtain an acquittal.
4. Defendant has the right to have an independent scientific analysis of the breath alcohol machine used, and to question the validity and accuracy of its purported test results. *See* California v. Trombetta, 467 U.S. 479, 488-89 (1984); Champion v. Dep't of Pub. Safety, 721 P.2d 131, 132 (Alaska 1986); People v. Watson, 221 N.E.2d 645, 649 (Ill. 1966); State v. Clark, 593 P.2d 123, 128 (Or. 1979); People v. Dodsworth, 376 N.E.2d 449, 451 (Ill. App. Ct. 1978); State v. Torrey, 574 P.2d 1138, 1142 (Or. Ct. App. 1978); State v. Clark, 583 P.2d 1142, 1145 (Or. Ct. App. 1978). *Cf.* Crane v. Kentucky, 476 U.S. 683 (1986).
5. The on-site testing and inspection of the breath alcohol machine should be conducted in the presence of, and at the mutual convenience of both parties, (State Department of Public Health representative and Defendant's consultant) in order to maintain the breath machine's integrity, calibration, and operation.
6. The Defendant must be allowed a reasonable amount of time to conduct the independent test analysis, using a blind testing procedure with coded samples being provided to the [Illinois Department of Public Health (IDPH)] or its agent for verification of the sample's composition upon completion of the testing.
7. The (*Named Law Enforcement Agency*) and their legal representatives or agents are to furnish to Defendant's forensic consultants complete copies of all machine schematics; electrical diagrams; software component information; make, model, serial number, and manufacturer of the machine; test analysis and certification log (daily test log); customer advisories; recall notices;

police department, city, county and state (named State Governmental Agency) memoranda and notices concerning the machine; total number of breath machines owned or in the control of the police department on date of test analysis; copies of all customer advisories, interoffice memoranda, bulletins, notices and information concerning the breath machine's operation, ownership and maintenance; maintenance and calibration logs and records; copies of all customer complaints to manufacturer, distributor and state agencies; and specific location of breath machine on date of testing and length of time at that location. All information about the breath alcohol machine must be provided from the date of manufacture up to the date of the trial, including: date of manufacture, date of purchase, and details of actual possession(s).

This information shall be given to Defendant's consultants at least seven business days prior to actual examination and testing of the breath alcohol machine used in this case. *See California v. Trombetta*, 467 U.S. 479, 485 (1984); *United States v. Nixon*, 418 U.S. 683, 699 (1974); *People v. Gerald*, 107 N.E.2d 165, 174 (Ill. 1914); *People v. Buzan*, 184 N.E. 890 (Ill. 1933); *People v. Endress*, 245 N.E.2d 26 (Ill. App. Ct. 1969); 625 ILL. COMP. STAT. ANN. 5/11-501.2(4) (West 1993).

8. "[D]ue process requires consideration of the margin of error inherent in the breath testing procedure used in this case [T]he defendant has a constitutionally guaranteed right to attack the accuracy of a breath alcohol test." *Barcott v. Dep't of Pub. Safety*, 741 P.2d 226, 228-29 (Alaska 1987) (reasoning that the defendant has a constitutional right to present critical evidence).

9. The per se drunk driving charge is based solely upon a suspect's breath alcohol concentration (BrAC) that is measured by breath alcohol testing equipment. The BrAC is then used as scientific evidence of guilt. However, the breath alcohol test result, although relevant, is only circumstantial evidence of intoxication. The BrAC value is not conclusive of absolute guilt. It is subject to collateral attack. *See Denison v. Anchorage*, 630 P.2d 1001, 1003 (Alaska Ct. App. 1981); *People v. Alvarez*, 515 N.E.2d 898, 900 (N.Y. 1987); *People v. Bryant*, 499 N.E.2d 413 (Ill. 1986); *State v. Lowther*, 740 P.2d 1017, 1020 (Haw. Ct. App. 1987). A legislature cannot conclusively establish the general reliability of a breath alcohol machine when it statutorily approves the device, process, methods, and operation. While the legislature may provide for the admissibility of chemical tests, "the Legislature may not declare the weight to be given to evidence or what evidence shall be conclusive proof of an issue of fact . . . thus the test results are not 'unassailable'." *Lowther*, 740 P.2d at 1020 (quoting *State v. Burling*, 400 N.W.2d 872, 876 (Neb. 1987)). The legislature cannot by fiat enact automatic admissibility of evidence

and then deny a person's right of confrontation challenging that evidence. See *Crane v. Kentucky*, 476 U.S. 683, 690 (1986). "[D]ue process will not allow the results of a chemical test . . . to be conclusively presumed accurate." See *Barcott v. Alaska*, 741 P.2d 226, 230 (Alaska 1987); *Lowther*, 740 P.2d at 1020.

10. Calibration and recertification does not ensure accuracy and reliability. Monthly recertification of the breath alcohol machine does not make the results presumptively accurate. See *Commonwealth v. Sloan*, 607 A.2d 285, 292 (Pa. Super. Ct. 1992); Gil Sapir, et al., *Breath Alcohol Machines: Evidence Foundation Requirements in Illinois*, 22 J. MARSHALL L. REV. 1, 11 (1988). Even though the breath alcohol machine is examined and certified "once a month not to exceed 45 days," ILL. ADMIN. CODE tit. 77, § 510.100(a) (1999) [hereinafter IDPH Regs.], its recertification process does *not* authenticate the reliability and credibility of its test results and breath ticket contents. The monthly maintenance check is a mechanical tune-up back to the manufacturer's operational specifications. It does not change the inherent design and function of the breath alcohol machine. Furthermore, "records [can be] in error and they deserve no special presumption of credibility as compared to opposing testimony of a witness." *Nowakowski v. Hoppe Tire Co.*, 349 N.E.2d 578, 582 (Ill. App. Ct. 1976); *Smith v. Dept. of Prof'l Regulation*, 59 N.E.2d 884, 887 (Ill. App. Ct. 1990) (quoting *Nowakowski*, 349 N.E.2d at 582).

11. Basic laws of evidence are applicable to breath alcohol testing. Governmental approval of the equipment establishes only minimum uniform performance criteria as a basis for foundational admissibility. Neither statute nor administrative regulations contain any language that breath alcohol test results are un rebutted absolute proof of a per se drunk driving violation and guilt. The Legislature and IDPH cannot determine the weight and credibility of breath alcohol testing evidence. To do so would usurp the jury's function and violate due process.

12. The (*Named State*) Supreme Court has provided for full discovery to the accused in criminal cases. See, e.g., ILL. S. CT. R. 412 (1999) (regarding the disclosure of prosecutorial information to the defense). The legislature has established State chemical test disclosure requirements "in civil and criminal proceedings by requiring that *full information* concerning the test or tests *shall be made* available to the person or such person's attorney." 625 ILL. COMP. STAT. ANN. 5/11-501.2(4) (West 1993) (emphasis added).

13. Discovery limitations in misdemeanor cases are *not* applicable. See, e.g., *People v. Schmidt*, 309 N.E.2d 557, 558 (Ill. 1974) (holding that criminal discovery cannot be extended to a misdemeanor case). Neither are the limitations discussed in *People v. Finley*, 315 N.E.2d 222, 232 (Ill. App. Ct. 1974). The fact that the DUI statute has been changed twice lends support to the

proposition that “[a]n amendment to a statute is presumed to be intended to effect a change in the law.” *People v. Griffith*, 493 N.E.2d 413, 416 (Ill. App. Ct. 1986); *In re Marriage of Freeman*, 478 N.E.2d 326, 329 (Ill. 1985). Also, “penal statutes are strictly construed against the State.” *People v. Brown*, 455 N.E.2d 287, 289 (Ill. App. Ct. 1983).

14. The United States Supreme Court has upheld the right of discovery in drunk driving cases, including alternative means to demonstrate a Defendant’s innocence when potentially exculpatory evidence is not available, especially with breath alcohol testing machines. *California v. Trombetta*, 467 U.S. 479, 489 (1984).

15. (*Named*) Defendant is charged with driving his/her vehicle with a BrAC level above the statutory intoxication limit. Based upon this criminal charge, Defendant has the right to receive full information regarding the test used as a basis for this allegation. Inherent in Defendant’s discovery and confrontation rights is the unassailable right to present rebuttable testimony through an inspection of the breath alcohol machine. Legislative approval of the breath alcohol machine and its monthly recertification does not supersede his right to a fair trial. Defendant’s right of due process and confrontation may not be abridged for any reason.

WHEREFORE, (*Named*) Defendant respectfully requests that this Honorable Court enter an Order authorizing the inspection and testing of the breath alcohol machine used by the (*Named Law Enforcement Agency*) at (*Location*). The independent inspection and testing of the breath alcohol machine shall be conducted under guidelines approved by this Court to provide any or all relief this Court deems appropriate and just.

Respectfully Submitted,

Name,
Attorney for Defendant