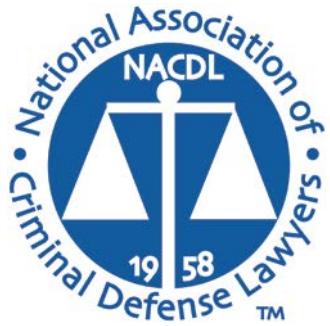

Written Statement of
Lisa Wayne
President

on behalf of the

National Association of Criminal Defense Lawyers

Before the
Senate Committee on Commerce, Science, and Transportation

Re: "Turning the Investigation on the Science of Forensics"

December 7, 2011

Chairman Rockefeller, Ranking Member Hutchison and Members of the Committee:

On behalf of the National Association of Criminal Defense Lawyers (NACDL), I am writing to express the views of the criminal defense bar on the state of forensic science and the need for specific reforms. We understand that not all of the reforms proposed here are within the Committee's purview, but we hope that this statement serves as a useful overview of the type of systemic and comprehensive reform that is needed to ensure the reliability of forensic evidence and the integrity of our criminal justice system.

The National Association of Criminal Defense Lawyers (NACDL) is the preeminent organization in the United States advancing the mission of the nation's criminal defense lawyers to ensure justice and due process for persons accused of crime or other misconduct. A professional bar association founded in 1958, NACDL's 10,000-plus direct members in 28 countries - and 90 state, provincial and local affiliate organizations totaling more than 40,000 attorney's -- include private criminal defense lawyers, public defenders, active U.S. military defense counsel, law professors and judges committed to preserving fairness within America's criminal justice system.

Fundamental components of the representation of the accused are that all defendants have the Fifth Amendment right to due process of law and the Sixth Amendment rights to present evidence, to confront witnesses against them, to a fair trial, and to the effective assistance of counsel.

The great number of DNA and other exonerations undermines the belief that the criminal justice system correctly identifies the perpetrators of criminal offenses and prevents wrongful convictions. Especially troubling is the role that invalid and unreliable forensic evidence has at times played in contributing to those wrongful convictions. By way of illustration, a recent study observed that forensic science practitioners called by the prosecution provided trial testimony with conclusions either misstating empirical data or wholly unsupported by empirical data in greater than the majority of cases where DNA evidence exonerated someone whose conviction had been supported by forensic evidence.[1]

There is, of course, a great difference between the use of forensic evidence to identify an individual as having left evidence at a crime scene and its use to exclude an individual as the possible contributor. It is generally a relatively simple and undisputed matter to exclude someone as the contributor of forensic evidence. Most problems in forensic identification evidence occur when practitioners conclude that a particular person is the contributor of evidence found on the scene.[2]

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[1] Brandon L. Garrett & Peter J. Neufeld, *Invalid Forensic Science Testimony and Wrongful Convictions*, 95 Va. L. Rev. 1 (2009) (82 of 137 DNA exoneration cases relied upon invalid forensic evidence).

[2] *Compare* David H. Kaye, David E. Bernstein & Jennifer L. Mnookin, The New Wigmore: Expert Evidence 450 (2004) [hereinafter "Kaye, et al., The New Wigmore"] ("A suspect who is excluded rarely would be prosecuted. . . . Unless the government shows that the exclusion could be spurious of advances as to how a defendant who is not the source of the trace evidence could be guilty, the exclusion should be disparities." (footnote omitted)); National Research Council, The Evaluation of Forensic DNA Evidence 51 (1996) ("The use of DNA techniques to exclude a suspect as the source of DNA has not been the

The United States Supreme Court cautioned a generation ago that "[e]xpert evidence can be both powerful and quite misleading because of the difficulty in evaluating it."[3] The recognition of deficiencies with forensic evidence has only grown since then.[4] Nonetheless, the prevalence of forensic evidence in criminal cases has grown over time. In this era of increasing reliance on forensic evidence, defense lawyers, more than ever, need to have the ability to understand such evidence to effectively represent those accused and to ensure that every defendant is afforded due process of law. When it is the defense counsel who considers the affirmative use of forensic evidence – whether to provide reasons for the jury to doubt the prosecution's charges or even to fully exonerate the defendant – defense lawyers, consistent with their Sixth Amendment and ethical obligations, need independent access to scientific and forensic experts and evidence to prepare and present the defense. In the more frequent instances in which it is the prosecution that seeks to use forensic evidence to carry its burden to prove beyond a reasonable doubt that a criminal defendant committed a crime, defense counsel is constitutionally and ethically obligated to ensure that the evidence is sufficiently accurate and reliable to be presented to a jury and that, if it is so presented, that the jury understands the limits of the evidence.

Contrary to media portrayals of forensic science in popular TV shows, forensic evidence presented in court is at times based on speculative research, subjective interpretations, and inadequate quality control procedures. Ensuring the scientific integrity of forensic evidence is essential to prevent wrongful convictions and to exonerate the innocent. In February 2009, the National Academies' National Research Council issued a report, *Strengthening Forensic Science in the United States: A Path Forward* (National Academies Press 2009) ("NAS Report"), that set forth a roadmap for reform and renewed the promise of fairness in the criminal justice system.

The NAS Report highlighted important deficiencies, and NACDL supports the recommendations intended to remedy those deficiencies. In addition, NACDL adopted the following Principles and Recommendations to produce accurate and reliable forensic evidence results and to increase the likelihood of fair and accurate verdicts in our courtrooms. The Principles and Recommendations discuss seven central areas of need: (1) a central, science-based federal agency, (2) a culture of science, (3) a national code of ethics, (4) the prerequisite of research, (5) education, (6) transparency and discovery, and (7) defense resources, particularly for indigent defense services.

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subject of controversy.") *with* Kaye et al., The New Wigmore, *supra* 447 (For matches, "ascertaining any association requires the assistance of technology to detect the characteristics. In addition, determining the extent to which the more esoteric trace evidence narrows the set of possible suspects requires specialized knowledge and study.").

[3] *Daubert v. Merrell Dow Pharm.*, 509 U.S. 579, 595 (1993).

[4] *See Melendez-Diaz v. Massachusetts*, __ U.S. __, __, 129 S. Ct. 2527, 2537 (2009) ("Serious deficiencies have been found in the forensic evidence used in criminal trials. . . . '[T]he legal community now concedes, with varying degrees of urgency, that our system produces erroneous convictions based on discredited forensics.'" (quoting Pamela R. Metzger, *Cheating the Constitution*, 59 Vand. L. Rev. 475, 491 (2006))).

I. CENTRAL, SCIENCE-BASED FEDERAL AGENCY

PRINCIPLE: The NAS Report's primary and central reform – that Congress should establish and appropriate funds for the establishment of a science-based federal agency – is of the utmost importance. This agency's purpose would be to promote the development of forensic science into a field of multidisciplinary research and practice founded on the systematic creation, collection, and analysis of relevant data. As the NAS recognized, this agency cannot be part of the Department of Justice or any other existing federal department or agency whose primary mission involves prosecution or law enforcement. This agency should be created and established as an immediate policy priority while there are ongoing efforts to fund and generate research. Validated and reliable forensic evidence is an important and necessary component of the criminal justice system, and the development of such evidence should be encouraged. The results of any forensic theory or technique whose validity, limitations, and measures of uncertainty have not been established should not be admitted into evidence to prove the guilt of an accused person. *See* Section IV (Prerequisite of Research). Therefore, a central priority of the agency should be research programs to determine the validity, limitations, and measures of uncertainty associated with the forensic disciplines, particularly relating to forensic evidence that purports to identify any specific individual as the contributor of crime scene evidence.

RECOMMENDATION 1 (Staffing):

> As the NAS Report suggested, the federal agency should have a full-time executive director, professional staff, and an advisory board composed of a broad range of individuals with interest and expertise in issues that relate to the forensic disciplines and the criminal justice system.

RECOMMENDATION 2 (Scope of responsibilities):

> Congress should allocate funds to the federal agency, which should serve as the authority by which funds are conscientiously dispensed with a national strategy in mind. As recognized by the NAS Report, the federal agency should, *inter alia*, oversee all programming that relates to forensic science and forensic evidence in the United States, establish national reporting standards for each forensic discipline, and encourage research by national research universities and other independent research-based institutions, including providing scholarships, fellowships, and grants to promote interest in the forensic disciplines among graduate students and faculty in the basic sciences, statistics, and engineering.[5]

[5] The NAS Report details the broad scope of the agency's mandate. Such programming could include the development of programs to determine the validity and limitations of the forensic disciplines and to improve the understanding of them by members of the criminal justice system; a strategy to improve forensic science research and educational programs; the funding of academic, independent, and government research projects and educational programs, with emphasis on programs that address the credibility, validity, reliability, and understanding of forensic evidence; the establishment of best practices for forensic science practitioners and laboratories; the determination whether the government should financially support freestanding forensic science programs in colleges and universities or encourage conventional science, statistics, and engineering programs to include forensic tracks as part of their programs; and evaluation of the development and introduction of new technologies in forensic

RECOMMENDATION 3 (Board of accreditation and certification):

> To strengthen regulation of the forensic disciplines, the federal scientific agency should establish a board on accreditation and certification with full authority to accredit and revoke the accreditation of all laboratories, to certify and discipline all forensic science practitioners, and to establish a program to audit all laboratories to ensure compliance with national standards.[6] Oversight of accreditation and certification programs should be housed outside the forensic disciplines themselves and should be the sole responsibility of the federal agency. Certification is a matter for the federal agency and not for the courts. Forensic science practitioners who practice laboratory bench work should be certified. Conversely, because there is a difference between conducting bench examinations and evaluating the results of the examinations or evaluating the methodology underlying the examinations, those forensic science practitioners and other scientists and experts who have specialized knowledge and expertise and/or conduct research and/or teach in academic and private institutions but who do not perform routine bench work in a forensic facility do not need to be certified in the particular procedure to evaluate the empirical evidence concerning the validity, reliability, and accuracy of various examinations.[7]

RECOMMENDATION 4 (Proficiency testing program):

> The federal agency should institute a national, uniform proficiency testing program. Proficiency testing should mirror actual case work. Because proficiency testing is an integral part of the accreditation and certification process, proficiency testing should be mandatory for forensic science practitioners.[8]

II. CULTURE OF SCIENCE

PRINCIPLE: A culture of science that encourages independence, openness, objectivity, error management, and critical review should be promoted in forensic science practitioners and facilities. Many forensic science practitioners and facilities already exhibit this culture. However, as the NAS Report recognized in calling for segregation of forensic facilities from law enforcement and prosecutorial offices, a close working relationship with law enforcement has

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investigations, the use of established technologies on new or different types of evidence, a comparison of new technologies with older ones, and a consideration of the limits of new ones.

[6] Fraud in case work and other intentional acts of misconduct – as defined by the federal agency – are illustrative of grounds for revocation of accreditation or decertification.

[7] The existence of certification should neither create a presumption of admissibility of the forensic science practitioner's testimony nor obligate the court to admit the testimony. Similarly, the absence of certification should neither create a presumption of inadmissibility nor obligate the court to exclude the evidence.

[8] Efforts should be made to join with academic institutions and researchers to fund research for the development and implementation of "blind" proficiency testing that (1) mirrors actual case work, (2) is as difficult as true practitioner case work, (3) is well documented; (4) evolves with the learning of new developments that may affect proficiency, and (5) is, to the extent possible, not made known to the practitioner to be a test. Proficiency testing programs should provide a mechanism whereby failure to successfully complete a test is reported to the agency and made known to those legal professionals who rely on or who have relied upon the practitioner's work, and results in a corrective action plan for the forensic science practitioner.

detrimentally influenced the mindset of other forensic laboratories and facilities and the personnel within them.[9] There should be a national, fundamental commitment to a culture of science among *all* facilities and *all* practitioners.

RECOMMENDATION 1 (Independence):

> Governmental forensic facilities and practitioners should be administered by independent agencies of federal, state, territorial, tribal, or local government. Law enforcement and prosecutorial agencies should have no controlling administrative, budgetary, or managerial relationships to forensic facilities and practitioners. Access of defense attorneys to governmental forensic facilities and forensic practitioners should not be limited by law, policy, or managerial attitude.

RECOMMENDATION 2 (Openness):

> The exchange of research information, methods, and data is critical to the advancement of forensic science; therefore, forensic facilities should adopt policies that promote openness in operational, management, and scientific procedures. All scientific protocols, methodologies, and data should be available for examination and critique by academic and research scientists, legal scholars, and forensic science practitioners to promote knowledge, development, and education.

RECOMMENDATION 3 (Objectivity):

> Forensic facilities and practitioners should ensure the segregation of case information extraneous to the examination and minimize the impact of unconscious bias on the interpretation of results.[10]

RECOMMENDATION 4 (Error management):

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[9] Many forensic facilities have a number of ways in which they consciously and unconsciously have replaced a culture of science with a law enforcement mentality. *See* National Research Council, Strengthening Forensic Science in the United States: A Path Forward 24 (National Academies Press 2009) [hereinafter "Strengthening Forensic Science"] ("Congress should authorize and appropriate incentive funds . . . for the purpose of removing all public forensic laboratories and facilities from the administrative control of law enforcement agencies or prosecutors' offices."); http://www.ascld.org/files/membershipinfo.pdf (defining membership of American Society of Crime Laboratory Directors as leadership of forensic facilities "whose principal function is the examination of physical evidence for *law enforcement agencies* in criminal matters and who provide testimony with respect to such physical evidence to the criminal justice system." (emphasis added)).

[10] Garrett & Neufeld, *supra* note 1, at 67-71 (discussing erroneous forensic odontology interpretations); Dan E. Krane, et al., *Sequential Unmasking: A Means of Minimizing Observer Effects in Forensic DNA Interpretation*, 53 J. Forensic Sciences 1006 (2008) (calling for forensic science practitioners to analyze evidence without knowledge of known profiles); Robert B. Stacey, *A Report on the Erroneous Fingerprint Individualization in the Madrid Train Bombing Case*, 54 J. Forensic Identification 706 (2004) (discussing false fingerprint identification of United States lawyer suspected of overseas terrorist act in part because lawyer was known to worship at mosque); William C. Thompson, *Painting the Target Around the Matching Profile: The Texas Sharpshooter Fallacy in Forensic DNA Interpretation*, 8 Law, Probability & Risk 257 (2009) (discussing *post hoc* interpretive shifting that can occur with forensic testing by practitioners seeking to fit crime scene evidence with known profile of suspect).

Forensic evidence conclusions should include the limitations of the opinion offered and the various error rates associated with the method or technique.[11] Error rates encompass both methodology error and practitioner error: the chance that the scientific procedure may produce the wrong result and the chance that the practitioner may not have done the procedure correctly. As the NAS Report recognized, errors associated with the method and those associated with the practitioner are inextricably linked. If research to quantify the various error rates is still ongoing and a report is written and/or trial testimony is given regarding the results of a forensic examination, forensic science practitioners should acknowledge the unknown nature and degree of error in such written and testimonial reports of their findings.[12]

RECOMMENDATION 5 (Critical review):

Employment with a forensic facility should require rigorous, continual evaluations of professional competency and independent technical review of case work. Within the forensic science community, there should be critical assessment by the scientific and legal communities through widely read and well-respected professional journal publications, conferences, and training seminars.[13]

III. CODE OF ETHICS

PRINCIPLE: All forensic science practitioners and supervisors should be required to adhere to a professional code of ethics that clearly articulates ethical obligations and contains a meaningful enforcement mechanism.[14]

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[11] *See, e.g.*, Strengthening Forensic Science 142 ("Although there is limited information about the accuracy and reliability of friction ridge analyses, claims that these analyses have zero error rates are not scientifically plausible."); *id.* 154 ("[T]he decision of the tool mark examiner remains a subjective decision based on unarticulated standards and no statistical foundation for estimation of error rates."). Forensic opinions of individualization and identity should be replaced by opinions that include probabilistic match associations, as is done with DNA evidence, together with provision of the error rates involved in determining that various characteristics on specimens "match." Simon A. Cole, *Forensics without Uniqueness, Conclusions without Individualization: The New Epistemology of Forensic* Identification, 8 Law, Probability & Risk 233 (2009); Michael J. Saks & Jonathan J. Koehler, *The Coming Paradigm Shift in Forensic Identification Science*, 309 Science 892 (2005).

[12] This recommendation is made with the realization that some of the recommendations contained in this report may take longer to implement than others, and that, if some courts nevertheless admit forensic evidence prior to completion of studies to determine the measures of uncertainty of the particular forensic techniques, forensic science practitioners should then acknowledge the unknown nature and degree of error in such written and testimonial reports of their findings. *Cf.* Section IV (Prerequisite of Research), Principle ("The results of any forensic theory or technique whose validity, limitations, and measures of uncertainty have not been established should not be admitted into evidence to prove the guilt of an accused person.").

[13] Exchange programs, fellowships, and scholarships should be established to promote interaction and communications between the academic, research and forensic science practitioner communities.

[14] While a national code of ethics would provide needed uniformity, discipline-specific codes or state codes enforced through licensing boards may be sufficiently effective. National model codes may provide useful guidance in unifying practices and standards.

RECOMMENDATION 1 (Continuing education):

The code of ethics should include continuing educational requirements for all forensic science practitioners that includes specialized training, discovery obligations, and evidence-handling requirements.

RECOMMENDATION 2 (Acknowledgement of subjectivity):

The code of ethics should require the acknowledgement of subjectivity in opinions and conclusions that may be presented in court given a particular set of findings.

RECOMMENDATION 3 (Disclosure obligations):

The code of ethics should reflect an understanding of discovery obligations and the constitutional duty of the government and its agents to disclose to the defense potentially favorable information in criminal proceedings.

RECOMMENDATION 4 (Enforcement):

The code of ethics should have a clearly articulated process for making complaints, and a transparent enforcement mechanism with a range of meaningful penalties that include the disqualification from forensic practice as an available sanction for intentional fraud and other gross misconduct. Adverse ethical findings should be made public.

IV. PREREQUISITE OF RESEARCH

PRINCIPLE: Research programs pertaining to the accuracy, reliability, and validity of forensic theories and techniques, and their limitations and measures of uncertainty where calculable, should immediately be established, fully funded, and carried out. This research should be led and primarily conducted by credentialed and qualified scientists at national research institutions; forensic science practitioners – particularly those guided by a culture-of-science mindset and with histories of independence from law enforcement – should be active research participants and partners.[15] Not all forensic disciplines are equally grounded in validated science.[16] Nor are

[15] Strengthening Forensic Science 71 ("Although the FBI and NIJ have supported some research in the forensic science disciplines, the level of support has been well short of what is necessary for the forensic science community to establish strong links with a broad base of research universities and the national research community. Moreover, funding for academic research is limited and requires law enforcement collaboration, which can inhibit the pursuit of more fundamental scientific questions essential to establishing the foundation of forensic science."); *id.* 189 ("Much more federal funding is needed to support research in forensic science and forensic pathology in universities and in private laboratories committed to such work.").

[16] *Id.* 6-7 ("The term 'forensic science' encompasses a broad range of forensic disciplines, each with its own set of technologies and practices. In other words, there is wide variability across forensic science disciplines with regard to techniques, methodologies, reliability, types and numbers of potential errors, research, general acceptability, and published material. . . . Many of these differences are discussed in the body of this report."); i*d.* 127-82 (describing various forensic disciplines and the differences in their scientific underpinnings).

all forensic processes within a particular discipline equally grounded in validated science.[17] The results of any forensic theory or technique whose validity, limitations, and measures of uncertainty have not been established should not be admitted into evidence to prove the guilt of an accused person.[18] Prior admissibility or use of the results of a forensic discipline, technique, or theory is not conclusive proof of validity or reliability.[19]

RECOMMENDATION 1 (Determination of probability associations):

> Based upon the research into the uncertainties inherent in most forensic processes, match probability associations about the evidence should, whenever possible,

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[17] For example, most uses of forensic evidence to exclude an individual as the possible contributor of evidence left on a crime scene are relatively straightforward applications of accepted procedures. *See supra* note 2.

[18] *See generally In re Winship*, 397 U.S. 358, 362 (1970) (referring to presumption of innocence as "that bedrock 'axiomatic and elementary' principle whose 'enforcement lies at the foundation of the administration of our criminal law'" (quoting *Coffin v. United States*, 156 U.S. 432, 453 (1895))).

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

[19] *See, e.g.*, *United States v. Green*, 405 F.Supp.2d 104, 109 (D. Mass. 2005) ("The more courts admit this type of tool mark evidence without requiring documentation, proficiency testing, or evidence of reliability, the more sloppy practices will endure; we should require more."). Courts have historically exhibited extreme reluctance to deny the prosecution the use of forensic evidence at trial. *See* Strengthening Forensic Science 96 (citing Peter J. Neufeld, *The (Near) Irrelevance of* Daubert *to Criminal Justice: And Some Suggestions for Reform*, 95 American J. Public Health S107, S109 (2005), and Paul C. Giannelli, *Wrongful Convictions and Forensic Science: The Need to Regulate Crime Labs*, 86 N.C. L. Rev. 163 (2007)). The NAS Report, since its publication in February 2009, has become part of a change in the legal landscape in which the need for demonstration of the scientific validity and limitations of forensic theories and techniques can no longer be doubted, and therefore unvalidated forensic evidence should not be admitted against a defendant in court. Despite this proscription against admission by the prosecution of unvalidated forensic evidence, some courts may nonetheless improperly admit such evidence prior to completion of the necessary studies to determine their validity and limits. Such circumstances should not occur; however, if they do, at a minimum, jurors must be instructed about the lack of demonstrated validity, the limitations of the opinion offered, and the existence and degree of various error rates associated with the method or technique; and the defense must be permitted to present evidence consistent those instructions.

generally replace conclusions such as "match," "uniquely associated with," "source attribution," "individualization," "conclusive," "positive," "absolute," and other similar terminology; and if such terms *are* used, they should only be used when probabilistically defined elsewhere in the report.

RECOMMENDATION 2 (Relationship between research studies and case work):

Studies of the reliability, validity, and accuracy of forensic techniques or theories should mirror actual case work and samples. The research should distinguish between industry performance (achieved across practitioners and facilities) and individual performance (achieved by specific practitioners and specific facilities).

RECOMMENDATION 3 (Critical review):

All research concerning the validity of a forensic theory or technique should be the product of high-quality research using sound methodology and published in well-regarded scientific journals that are widely, publicly available.

RECOMMENDATION 4 (Error rates):

Research should be conducted to establish the various types of error rates associated with the analysis. *See, supra* Section II (Culture of Science), Recommendation 4 (Error management) and note 12. To explore these issues, research methods should follow those used in clinical laboratories to generate such error rates.

RECOMMENDATION 5 (Automated techniques):

Research conducted to develop automated techniques capable of enhancing forensic technologies should include consideration of subjective interpretations and assumptions embedded in the technique and any limitations associated with the automated technique. Notification of such limitations should be provided together with results.

RECOMMENDATION 6 (Minimizing bias):

The basic principles of human observer bias and sources of human error are sufficiently established that there are precautions that can and should be implemented now.[20] As research into observer bias continues, additional findings should be taken into account in continual improvement of policies, protocols, and procedures.

RECOMMENDATION 7 (Documentation):

Documentation of all procedures and results of forensic examinations is necessary to permit an independent reconstruction of the examination to establish the reliability of the results. Research should be conducted to determine what constitutes sufficient documentation to permit an independent reconstruction of a forensic examination. Research should also be conducted into appropriate procedures for case-specific peer review by practitioners of each other's work and documentation of such, taking into account, *inter alia*, the extensive current literature on observer bias.

[20] *See, e.g.,* D. Michael Risinger, et al., *The* Daubert/Kumho *Implications of Observer Effects in Forensic Science: Hidden Problems of Expectation and Suggestion,* 90 Cal. L. Rev. 1 (2002).

V. EDUCATION

PRINCIPLE: The NAS Report accurately observed that legal professionals generally lack the scientific expertise necessary to comprehend and evaluate forensic evidence in an informed manner. Attorneys and judges need significant education and training in the fundamentals of science, statistics, and common forensic practices; and in the limitations of, and potential forms and scope of error associated with, those practices.

RECOMMENDATION 1 (Law students):

Law schools should offer courses in scientific principles and scientific evidence. As part of a law school curriculum, students should be encouraged to take courses in science and statistics. The development of J.D.-Ph.D. programs in basic sciences, statistics, and engineering should be encouraged through grants, fellowships, and other means.

RECOMMENDATION 2 (Lawyers and judges):

The federal government should appropriate funding for the training of criminal defense attorneys, prosecutors, and judges in science, general scientific principles, and the ethical and constitutional obligations related to the disclosure and presentation of forensic evidence. Given the different roles in the adversarial process between the prosecution and the defense,[21] separate trainings for prosecutors and defense counsel should be the primary pedagogical model, with the possibility of additional joint training where common purposes are identified. The training of prosecutors should include their disclosure obligations and the limits of forensic evidence. The training of defense lawyers should be focused on lawyers for indigent defendants, who have historically had the least access to forensic resources and on those regions of the country that have historically not had the funds to provide high-quality training to lawyers. The federal government should dedicate funds to public defender organizations, criminal defense bar associations, and other criminal defense organizations that currently have effective training programs and to any new or existing entities that demonstrate a commitment to training and present an effective training proposal for indigent representation.

RECOMMENDATION 3 (Educational resources):

Funds should also be appropriated for the purpose of establishing through the federal agency a public repository for transcripts of forensic science practitioners; pleadings and transcripts in cases involving challenges to forensic evidence; and journal articles and treatises involving forensic evidence, especially those journals or treatises that are

[21] *Compare Kyles v. Whitley*, 514 U.S. 419 (1995), *Giglio v. United* States, 405 U.S. 150 (1972), *Brady v. Maryland*, 373 U.S. 83 (1963), *and Napue v. Illinois*, 360 U.S. 264 (1959), *with Holmes v. South Carolina*, 547 U.S. 319 (2006), *Wiggins v. Smith*, 539 U.S. 510 (2003), *Crane v. Kentucky*, 476 U.S. 683 (1986), *Strickland v. Washington*, 466 U.S. 668 (1984), *Chambers v. Mississippi*, 410 U.S. 284 (1973), *and Washington v. Texas*, 388 U.S. 14 (1967). *See also* note 19, *supra* (citing cases on burden of proof, presumption of innocence, and right to compulsory process).

out-of-print or in limited circulation. The overseeing scientific federal agency should make available a public repository of such material.

VI. TRANSPARENCY AND DISCLOSURE

PRINCIPLE: The principle of transparency is fundamental to a fair and effective criminal justice system and is a hallmark of good science. As one scholar put it, "Science and secrecy do not sit comfortably together.[22] The ability of attorneys to evaluate, investigate, present, and confront forensic evidence at trial is dependent upon the complete and timely disclosure of information about the examination, the conclusions of the forensic science practitioner, and the facility where the examination was conducted. In every case involving forensic evidence, regardless of the current state of the science and/or advancements made, both the prosecution and the defense will require full access to the forensic evidence and underlying data related to a particular case.

RECOMMENDATION 1 (Transparency of forensic facility operations):

All operations of forensic facilities should be open to scrutiny; their training, administrative, and policy manuals should be publicly accessible.

RECOMMENDATION 2 (Ethical requirement):

Forensic facilities and practitioners should adopt and follow a code of ethics that emphasizes, among other things, the importance of full disclosure. *See* Section III (Code of Ethics), Recommendation 3 (Disclosure obligations).

RECOMMENDATION 3 (Disclosure obligations):

Forensic science practitioners and forensic facility leadership should be trained on the legal obligations of disclosure of *Brady v. Maryland*, 373 U.S. 83 (1963) and *Kyles v. Whitley*, 514 U.S. 419 (1995), and local discovery rules to ensure a full understanding of the constitutional duty of the government and its agents to disclose to the defense potentially favorable material and other discoverable information in criminal proceedings.

RECOMMENDATION 4 (Access to researchers and litigants):

Forensic research should be available to be scrutinized by scientists outside the forensic community. Research findings, underlying data, and courtroom testimony concerning such research and data should be archived in a publicly accessible database. *See* Section V (Education), Recommendation 3 (Educational resources).

RECOMMENDATION 5 (Minimum disclosure requirements):

Uniform minimum disclosure requirements should be imposed in all jurisdictions to promote the effective assistance of counsel, due process, and fair trials for all criminal

[22] Sheila Jasanoff, *Transparency in Public Science: Purposes, Reasons, Limits*, 69 Law & Contemporary Problems 21 (2006).

defendants.[23] Because, as noted before, *see, supra* notes 19 & 22, the prosecution and defense counsel have different responsibilities in our constitutional structure and because local discovery rules usually expand upon those differences by imposing broader disclosure obligations on the prosecution than on the defense, prosecution and defense disclosure obligations necessarily differ from each other.

RECOMMENDATION 6 (Reports):

Forensic reports should be complete, thorough, and accurate. Reports should be written so that members of the legal system are able to discern what method of comparison or technique was used. The report should clearly define the standards for the method or technique, all terms used in the report, and the results of the comparison.

RECOMMENDATION 7 (Databases):

Defense attorneys should have access to data in government-administered forensic databases upon a written statement that such access may lead to relevant evidence and is necessary for effective representation of a criminal defendant. Access should be provided in a manner consistent with the privacy rights of the individuals in the databases.

VII. DEFENSE RESOURCES

PRINCIPLE: Forensic reform must be viewed within the framework of the fundamental constitutional protections established to ensure fair and accurate verdicts based on trustworthy evidence and to prevent wrongful convictions. While the prosecution has historically been the primary proponent of forensic evidence, the defense bar also uses forensic evidence. Defense counsel sometimes use forensic evidence at trial, and, as is well known, many of the exonerations of innocent persons have been based on defense counsel's use of forensic evidence. Additionally, even hampered by severe economic constraints, it is typically the defense bar that

[23] The following should be readily accessible to attorneys representing criminal defendants in cases involving scientific evidence: (1) all information pertaining to the analysis; (2) information pertaining to quality control within the forensic facility; (3) information pertaining to the forensic science practitioner; and (4) standard operating procedure manuals and validation studies. Reports should include: (1) the opinion that will be presented in court; (2) all assumptions being made in rendering the above opinion; (3) a clear characterization of any limitations and an associated statistic that describes the weight that should be attributed to the evidence; and (4) the underlying basis of the opinion including identification of any published or unpublished material relied on. Forensic facilities should provide up-front information regarding the results of examinations, all results of automatic database searches conducted as part of the examination (*e.g.*, CODIS and AFIS), documentation of quality control problems in the facility or associated with a particular forensic science practitioner, and standard operating procedures and validation studies. While these disclosure requirements are broader than the current policies of most forensic facilities, they are not onerous and should not only be provided after litigation. In fact, some forensic facilities already disclose the case-specific information as a matter of course upon request, and/or provide protocols and other non-case-specific information publicly online.

has spotlighted deficiencies in, and limitations of, the various forensic disciplines.[24] Defense counsel should have the ability to consult with experts in the forensic disciplines and in related scientific fields to identify for the courts and juries the scientific limits of the evidence and to present the results of independent testing and the testimony of independent experts when appropriate. Forensic reform should therefore include providing the defense with resources to obtain the assistance of forensic and scientific experts for confidential consultation and testimony, and the use of forensic facilities for independent, confidential testing. In all jurisdictions, indigent defendants, like defendants with financial means, should have access to assistance from appropriate experts.

RECOMMENDATION 1 (Scope):

> Criminal defendants should be provided expert assistance commensurate with the needs of the case. Assistance shall include consultation with experts, expert testimony, and testing at forensic facilities.

RECOMMENDATION 2 (Indigent defense):

> The federal government, through the central federal scientific agency, should provide increased resources to the institutional indigent defense bar to provide for greater access to, and assistance by, experts versed in the forensic disciplines and their scientific underpinnings. In those circumstances where some or all indigent representation is provided by public defender offices, this money should be provided directly to federal, state, territorial, tribal, and local public defender offices for those offices' independent determinations of how best to use funding for forensic services in the representation of their indigent defendants. In those circumstances where indigent representation is provided by non-institutional court-appointed attorneys and circumstances where the accused can retain counsel but cannot afford expert services, the central federal scientific agency should provide money specially targeted for scientific and forensic assistance to the courts or agencies designated to administer funding to court-appointed counsel. All such funds for non-institutional court-appointed lawyers should be available to court-appointed counsel upon a written, *ex parte* statement that expert assistance is necessary to effectively represent the defendant.

RECOMMENDATION 3 (Experts):

> Although individuals trained as forensic science practitioners are one category of expert who may possess relevant and specialized knowledge, there are many other types of experts to whom prosecutors and defense lawyers can and should turn for assistance in understanding forensic evidence. In addition to forensic science practitioners, lawyers frequently consult with and call as trial witnesses scientists employed by academic and private institutions who have expertise and training in

[24] *See generally* Jay D. Aronson, Genetic Witness (2007) (discussing how defense courtroom challenges to admission of forensic DNA evidence led to vast improvement in its development and presentation).

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scientific and forensic disciplines, scientific principles including validity testing and the evaluation of empirical data, and in other scientific disciplines that provide the underpinning for, and context of, forensic disciplines. Further, courts have also recognized that even scholars and academic researchers who do not have degrees in science but whose publications demonstrate an understanding of the underpinnings of particular forensic discipline can contribute to the full and proper evaluation of forensic evidence. The funding for expert assistance should necessarily support and encourage assistance both from forensic practitioners and from scientists and academicians whose expertise can relate to and inform the meaning of the forensic evidence.

RECOMMENDATION 4 (Consultation):

Government forensic laboratories and other facilities that contract with the government should be open and accessible to both prosecutors and defense lawyers.[25] In that regard, forensic science practitioners and directors should be available to meet with defense counsel and experts retained by the defense to discuss and answer questions regarding the methodologies, tests, and findings in a particular case. Government forensic science practitioners should also, when practical, be available to consult with defense counsel about cases from the same or other jurisdictions in circumstances in which there is no legal conflict of interest if defense counsel elects to seek assistance from such experts. Best practices generally prescribe that defense counsel consult an expert who is entirely independent of law enforcement and the prosecution. There should, therefore, never be a requirement or expectation that defense counsel will rely upon government forensic science practitioners as experts instead of consulting with private, independent experts.

RECOMMENDATION 5 (Confidential testing):

Government forensic facilities should be available if there is no conflict of interest to conduct confidential testing and to provide confidential results to the defense at the request of defense counsel. Best practices generally prescribe that defense counsel use a forensic facility that is entirely independent of law enforcement and the prosecution. Therefore, there should never be a requirement or expectation that defense counsel will use government forensic facilities to conduct independent testing. The defense may employ whatever facility – public or private – that it deems appropriate in a particular case. Because forensic facilities offer different services and have different strengths and weaknesses, funding should be made available to the defense to seek forensic testing from more than one facility on the same piece(s) of evidence.

[25] The association between forensic facilities and practitioners and law enforcement must end, with a culture of science fully inculcated throughout the entire forensic science community. Recommendations 3 and 4 of this section are made with the realization that some of the recommendations contained in this report may take longer to implement than others, and that the existing structure is one in which many forensic facilities *are* in an administrative, budgetary, and/or managerial subordinate role relative to law enforcement and prosecutorial agencies. *See supra* note 10.

On behalf of NACDL, I am grateful for the opportunity to submit this statement. Thank you for considering our views on this matter. We stand ready to assist the Committee and its staff in developing measures that would strengthen forensic evidence and its presentation in the courtroom.