

Amy Ely's response to PCAST

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Date: Fri, 15 Sep 2017 15:45:09 -0400
Attachment: 20160923 Memo re PCAST Report NAAG Amy Ely pdf (234.86 kB)

Hi Ted,

Here is Amy's response to the PCAST report. She has not widely disseminated it, but she has made it available to prosecutors.

I look forward to seeing you in DC.

Best,
Kris

ANALYSIS OF SEPTEMBER 19, 2016 PCAST REPORT: “FORENSIC SCIENCE IN CRIMINAL COURTS: ENSURING SCIENTIFIC VALIDITY OF FEATURE-COMPARISON METHODS”

September 23, 2016

***By Amie Ely, National Association of Attorneys General,
Director of NAGTRI Center for Ethics & Public Integrity***

I. PCAST Members and Senior Advisors

The President's Council of Advisors on Science and Technology (PCAST) refers to itself as “the leading external scientific advisory body established by the Executive Branch.” “Forensic Science in Criminal Courts: Ensuring Scientific Validity of Feature-Comparison Methods” (herein “Report”), released September 19, 2016, at 144.

All of the 19 Members of PCAST are scientists. Only one has practiced forensic science.¹ Members’ areas of expertise range from mathematics and genome research, to physics and computer engineering, to aerospace and environmental change. Despite this lack of training and experience, at least five Members have previously spoken about or written on the need for radical overhaul of the current judicial approach to forensic evidence admissibility.

Eric S. Lander, Co-Chair of the Council, is a mathematician and researcher in genome biology. Lander is the only PCAST Member to have served as an expert witness in forensics, as he has testified on behalf criminal defendants in the past.

In a case that began his long relationship with the Innocence Project, Lander testified, as one of several defense experts, regarding the admissibility of DNA evidence in the prosecution of Joseph Castro, who was charged with murdering a pregnant woman named Vilma Ponce and her 2-year old daughter. *See, e.g., People v. Castro*, 544 N.Y.S.2d 985, 985, 989 (Bronx S. Ct. 1989). A small bloodstain, which prosecution experts were prepared to testify came from Ms. Ponce, was found on Castro’s watch. After a lengthy hearing, Bronx Supreme Court Judge Gerald Scheindlin suppressed the DNA evidence and announced a new legal test for admissibility of DNA evidence. This decision was inconsistent with several other decisions admitting similar DNA evidence—one of which was later affirmed by the New York Court of Appeals in a decision that rebuked the *Castro* case. *People v. Wesley*, 83 N.Y.2d 417, 436 n.2 (NY 1994) (“We disagree with the conclusion of the court in *People v. Castro*”).²

¹ One other Member, S. James Gates, Jr., is a staff member of the National Commission on Forensic Science, which was established by the DOJ in 2013. Gates is a theoretical physicist who studies string theory. His 101-page C.V. reveals no familiarity with—or even interest in—any areas of forensic science. *See* Curriculum Vitae: Sylvester James Gates, Jr., *available at* http://www.umdphysics.umd.edu/images/CV/gates_cv.pdf.

² In an interesting footnote to the *Castro* case: Joseph Castro pled guilty about a month after the DNA evidence was suppressed, and admitted that the blood on his watch did, indeed, belong to the woman he stabbed to death. *See* “DNA Forensic Testing Industry Faces Challenges to Credibility,” *The Scientist*, Nov. 1989, *available at* <http://www.the-scientist.com/?articles.view/articleNo/10722/title/DNA-Forensic-Testing-Industry-Faces-Challenge-To-Credibility/>.

The analysis in *Castro* was also criticized by the Second Circuit Court of Appeals, which noted that Judge Scheindlin arbitrarily “added another layer to make [the] already conservative test [set forth in *Frye*,³ the case followed by New York state courts] even more stringent.” See *United States v. Jakobetz*, 955 F.2d 786, 794 (2d Cir. 1992).⁴ Concluding that even with “novel, complex, and confusing evidence” like the then-nascent field of DNA, “the jury must retain its fact-finding function,” the Circuit warned against erecting “a difficult hurdle” to admissibility that “excludes highly relevant evidence simply because it is complicated.” *Id.* at 796. It then applied Federal Rule of Evidence 702 to conclude that the challenged DNA evidence had been properly admitted by the federal district court and affirmed the conviction. *Id.* at 797.

Since *Castro*, Lander has been an activist for the need to reevaluate forensic evidence in criminal trials. As a recent example: in an April 2015 *New York Times* editorial, “Fix the Flaws in Forensic Science,” he wrote, “Troubling, about a quarter of the cases examined by the Innocence Project (on whose board I now serve) involved forensic scientists who had erroneously claimed to identify defendants with near-certainty by matching hair samples, fibers, shoe prints or bite marks.” Available at <http://www.nytimes.com/2015/04/21/opinion/fix-the-flaws-in-forensic-science.html>. In the same editorial, which was published five months before PCAST was given the mandate to examine forensic science, Lander wrote “No expert should be permitted to testify without showing three things: a public database of patterns from many representative samples; precise and objective criteria for declaring matches; and peer-reviewed published studies that validate the methods.”

Perhaps unsurprisingly, as summarized below, the recommendations made by PCAST largely mirror those outlined by Lander in his *NYT* editorial.

In addition to its scientific members, PCAST was advised by lawyers and judges PCAST referred to as “Senior Advisors.” The Senior Advisors include several federal judges and lawyers who have expressed dissatisfaction with forensic science. For example, one of the co-chairs, Judge Harry Edwards (D.C. Cir.), was a co-chair of a committee that prepared a 2009 report titled “Strengthening Forensic Science in the United States: A Path Forward,” available at <https://www.ncjrs.gov/pdffiles1/nij/grants/228091.pdf>, that was critical of forensic science and is relied upon in the PCAST Report. Edwards’s report concluded that “much forensic evidence—including, for example, bitemarks and firearm and toolmark identifications—is introduced in criminal trials without any meaningful scientific validation, determination of error rates, or reliability testing to explain the limits of the discipline.” Edwards Report at 107-08.

³ *Frye v. United States*, 293 F. 1013 (D.C. Cir. 1923).

⁴ The Second Circuit noted that the Eighth Circuit, in a decision that was vacated, briefly adopted the *Castro* analysis. *Jakobetz*, 955 F.2d at 794-95 (citing *United States v. Two Bulls*, 925 F.2d 1127 (8th Cir. 1991). In a later case, the Eighth Circuit held that even if *Two Bulls* had “any precedential value, it ended with *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 125 L. Ed. 2d 469, 113 S. Ct. 2786 (1993).” *Pioneer Hi-Bred Int’l v. Holden Found. Seeds, Inc.*, 35 F.3d 1226, 1229 (8th Cir. 1994). Accordingly, *Castro* should be treated as an anomaly that has been universally rejected—a legal reality not acknowledged in the PCAST Report.

Another PCAST Senior Advisor is Ninth Circuit Judge Alex Kozinski. In an editorial supporting the PCAST Report, which was published on the *Wall Street Journal* website several hours before the Report was made public, Kozinski opined that the Report “will immediately influence ongoing criminal cases, as it provides a road map for defense lawyers to challenge prosecution experts.” See Alex Kozinski, “Rejecting Voodoo Science in the Courtroom,” *Wall Street Journal*, available at <http://www.wsj.com/articles/rejecting-voodoo-science-in-the-courtroom-1474328199>.

II. The Report

PCAST released its Report, titled “Forensic Science in Criminal Courts: Ensuring Scientific Validity of Feature-Comparison Methods,” near midnight on September 19, 2016. This report followed an August 26, 2016 draft that was widely leaked to the press but, as far as we know, not provided through any official channels to stakeholders directly impacted by its conclusions.

As described in greater length below, after creating requirements to assess whether various forensic disciplines are “scientifically valid,” the Report then considers whether the following forensic feature comparison methods meet the test it created: (1) DNA analysis of single-source and simple-mixture samples, (2) DNA analysis of complex-mixture samples, (3) bitemarks, (4) latent fingerprints, (5) firearms toolmark identification, and (6) footwear analysis.⁵ The Report concludes that only DNA analysis of single-source and simple-mixture samples and latent fingerprint science are “foundationally valid”; that some means of analyzing complex-mixture samples are, to be colloquial, better than others; and that bitemarks, firearms toolmark identification, and footwear analysis all lack scientific validity.

A. The Report’s Requirements for “Scientific Validity”

The Report argues that the following requirements should be met before certain areas of forensic science are determined to be “scientifically valid” and thus worthy of admission in federal criminal cases. See Report at 65-66. Because these requirements employ terms of art that PCAST uses in its later analysis and recommendations, the model is summarized and those terms of art are defined here.

1. Foundational Validity

a. Procedure

First, the method itself is capable of identifying features in evidence samples (e.g., identifying the characteristics of a latent fingerprint left at a scene); *second* the method can be used to compare features in two samples (e.g., comparing the latent with a known fingerprint from a suspect); and *third*, the method contains guidance about at what level of similarity the features in the two samples should be declared to be some the same source.

⁵ The Report also refers to a recent DOJ hair analysis evaluation. *Id.* at 67.

b. “Empirical Estimates”

“*Appropriately designed studies*⁶ from multiple groups” that establish (1) the method’s false positive rate (e.g., how often the suspect fingerprint is incorrectly declared to match the latent); and (2) the method’s sensitivity (e.g., the probability that it declares a proposed identification between samples that actually come from the same source). *Id.* at 65.

N.B.: For “objective” methods (defined here to be only DNA analysis), demonstrating reliability of the individual steps is sufficient to fulfill the foundational validity requirement. For “subjective” methods (here, bitemarks, latent fingerprints, firearms identification, and footwear analysis) “black-box” studies⁷ are the only way to establish foundational validity; “[i]n the absence of such studies, a subject feature-comparison method cannot be considered scientifically valid.”

2. Validity as Applied

If, and only if, the forensic feature-comparison method has been established as “foundationally valid,” its validity must be established as applied in every case in which it is used. In essence, this means that the examiner must have passed appropriate proficiency testing and must have applied the appropriate procedures in the specific case in which s/he is testifying. The examiners must also, e.g., report the overall false positive rate and sensitivity.

B. The Report’s Findings Regarding Forensic Disciplines

After establishing its requirements for forensic methods to be considered foundationally valid and valid as applied, the Report then considers whether the following forensic feature comparison methods are “scientifically valid and reliable”: (1) DNA analysis of single-source and simple-mixture samples, (2) DNA analysis of complex-mixture samples, (3) bitemarks, (4) latent fingerprints, (5) firearms identification, and (6) footwear analysis.⁸ *Id.* at 67-122.

PCAST notes that it “expects that some forensic feature-comparison methods may be rejected by courts as inadmissible because they lack adequate evidence of scientific validity.” *Id.* at 122. Here are the Report’s findings:

1. DNA Analysis of Single-Source and Simple-Mixture Samples

Single-source DNA—a DNA sample from only one person—and simple-mixture DNA—DNA from two people, such as DNA from rapist and a victim obtained from a rape kit—are

⁶ The Report contains “a number of criteria” that should be satisfied by a study, including that it is “conducted or overseen by individuals or organizations with no stake in the outcome” and that “there should be multiple independent studies by separate groups reaching similar conclusions.” *Id.* at 66. Presumably, this would mean that studies done by the very forensic scientists who practice in the areas criticized by the Report would be deemed inappropriately designed, and that until more than one “independent” study has been completed and published, the forensic areas are insufficiently scientifically rigorous to be admitted in court.

⁷ “Black-box studies” are defined as “empirical stud[ies] that assesses a subjective method by having examiners analyze samples and render opinions about the origin or similarity of samples.” *Id.* at 48.

⁸ The Report also refers to a recent DOJ hair analysis evaluation. *Id.* at 67.

foundationally valid. For a particular DNA analysis to be valid “as applied”, the Report states, a testifying expert must have “undergone rigorous and relevant proficiency testing,” should disclose in report whether s/he was told any facts about the case that “might influence the conclusion”; “should disclose, upon request, all information about quality testing and quality issues in his or her laboratory.” *Id.* at 69; *see also id.* at 147.

2. DNA Analysis of Complex-Mixture Samples

The Report is relatively agnostic about whether the analysis of DNA from “complex mixtures”—that is, from more than two contributors—is foundationally valid. It concludes that one “subjective” method, Combined-Probability-of-Inclusion, “**is not foundationally valid,**” but allows that courts might nonetheless consider admitting evidence obtained from that method if the analysts followed “rules specified” in a recent paper. *Id.* at 82. A second “objective” method, Probabilistic Genotyping, is described as “**a relatively new and promising approach**” for which foundational validity has not yet been established. *Id.* at 82; *see also id.* at 148. It nonetheless concludes that additional studies by “multiple groups, *not associated with the software developers*” are necessary to establish whether Probabilistic Genotyping is foundationally valid. *Id.* at 79.

3. Bitemarks

The Report concludes that bitemark analysis does “**not meet the standards for foundational validity,**” and cites several studies that supported that conclusion. *Id.* at 82; *see also id.* at 148. The Report adds that it is unlikely that bitemark analysis could ever be scientifically valid and “advise[s] against” devoting resources into additional professionalization and study. *Id.* at 87.

4. Latent Fingerprints

The Report “applauds the FBI’s efforts” in completing several black-box studies to assess the foundational validity of latent fingerprint analysis and “white-box” studies designed to assess validity as applied. After reviewing eight latent fingerprint studies, the Report concludes that only two were “properly designed” and recommends that jurors be informed there were “only two properly designed studies of the accuracy of latent fingerprint analysis,” and that those studies revealed false positives as high as one-in-18—what it refers to as “substantial.”⁹ *Id.* at 96, 101. The Report also recommends, without any empirical support, that jurors also be told that, because examiners in the studies “were aware they were being tested, the actual false

⁹ The study from which the one-in-18 error rate is cited is unpublished, and this conclusion is at odds with that reached by the study itself, as the authors concluded that 35 of the 42 false positives—out of 995 examinations—were likely because the participants made clerical errors. *Id.* at 94-95. If the study’s author’s conclusions were respected, the error rate would be one error in 73 cases, rather than one out of 18. Moreover, the study included some verification by a second examiner—a process used by the FBI. *Id.* at 90. In that verification portion, every single error was caught by the second examiner. *Id.* at 96 n.285. Thus, in cases in which a second examiner verifies the conclusions of the first, the data suggests that the false positive rate is vanishingly small. The Report nonetheless suggests that jurors be informed that fingerprint examiners may incorrectly report a match in over 5% of the cases they examine.

positive rate in casework may be higher.” *Id.* at 101, 149. Nevertheless, the Report concludes that latent fingerprints are **foundationally valid**. *Id.* at 149.

The Report also concludes that examiners must “complete and document their analysis of a latent fingerprint before looking at any known fingerprint” and “separately document any additional data relied upon” to compare the latent and known fingerprints added after the comparison began.¹⁰ *Id.* at 100. As the Report required for DNA examiners, it states that each fingerprint examiner must undergo “regular and rigorous proficiency testing,” for his or her analysis in a case to be valid as applied. Moreover, the Report states that it must be established in every case that the latent prints are “of the quality and completeness represented in foundational validity studies,” and instructs that “courts should assess the measures taken to mitigate bias during casework” by “ensuring that examiners are not exposed to potentially biasing information...” *Id.* at 101, 149.

5. Firearms Identification

The Report concludes that firearms analysis—that is, determining whether a bullet was fired from a particular firearm—“**currently falls short of the criteria for foundational validity**” because only one “appropriately designed study” exists. (That study found a false positive rate of one-in-66, but because PCAST found the other seven studies it reviewed to be incorrectly designed, it didn’t consider firearms identification to have been subjected to sufficiently rigorous testing to permit juries to consider evidence or testimony from firearms analysts. *Id.* at 112). The Report adds:

Whether firearms analysis should be deemed admissible based on current evidence is a decision that belongs to the courts. If firearms analysis is allowed in court, the scientific criteria for validity as applied should be understood to require clearly reporting the error rates seen in appropriately designed black-box studies (estimated at 1 in 66, with a 95 percent confidence limit of 1 in 46, in the one such study to date).

Id. at 112, 150. If firearms analysis is allowed in court, PCAST’s validity analysis requires, once again, a proficient expert who discloses any facts of which s/he was aware that might influence her/his conclusion. *Id.*

6. Footwear Analysis

The Report does not address whether examiners can reliably determine “class characteristics” of shoes—e.g., if a shoeprint was made by a size 12 Nike Air Jordan released in 2014. Instead, it considers whether a court should introduce expert testimony that a particular piece of footwear—e.g., the size 12 Nike in the defendant’s closet—made a particular shoeprint. Because none of the three studies PCAST located were, in its estimation, correctly designed, it concluded that any conclusions reached by footwear analysts were “**unsupported by any meaningful evidence or estimates of their accuracy and thus are not scientifically valid.**”

¹⁰ Only if that process is used, the Report suggests, is latent fingerprint analysis foundationally valid. *Id.* at 101.

Id. at 150. The Report did not include any specific directions to courts—unlike for firearms analysis.

7. Hair Analysis

PCAST relied entirely on the materials the DOJ cited for the DOJ’s Proposed Uniform Language for Testimony and Reports for the Forensic Hair Examination Discipline (the “DOJ Proposal”).¹¹ While the Report does not explicitly state that hair analysis lacks foundational validity, it disagrees with the DOJ Proposal, which concludes that “microscopic hair comparison has been demonstrated to be a valid and reliable scientific methodology...” *Id.* at 118. In rather pointed language, PCAST states that the studies the DOJ cited in support of that conclusion “do not provide a scientific basis for concluding... a valid and reliable process” *id.* at 120, as they were “strongly criticized by other studies for flawed methodology,” *id.* at 118.

The PCAST Report then suggests that the DOJ faces “constraints” in undertaking scientific evaluations of forensic science “because critical evaluations by the DOJ might be taken as admissions that could be used to challenge past convictions or present prosecutions,” underscoring the need for “a science-based agency” not involved with the criminal justice system to carry out “evaluations of scientific validity and reliability.” *Id.* at 122.

C. The Report’s Recommendations to the Federal Government

After concluding that several forensic science disciplines lack foundational validity, the Report makes recommendations to federal science-based agencies, the FBI Laboratory, the U.S. Attorney General and her prosecutors, and the federal bench. In summary, those recommendations are that the science-based agencies and the FBI secure millions of dollars to do more research and then do that research; and that the Attorney General and federal judges do not seek to admit, or admit into evidence, evidence from the forensic disciplines that PCAST has determined lack “foundational validity.”

1. Science-Based Agencies

The Report recommends that NIST (the National Institute of Standards and Technology) take the lead in designing and implementing studies, and in assessing the foundational validity and reliability of laboratory techniques and practices. *Id.* at 124, 128. It also recommends that NIST prepare an annual report “evaluating the foundational validity of key forensic feature-comparison methods, based on available, published empirical studies.” *Id.* at 124, 128-129. The Report suggest that NIST should help “propel” a “transformation” in complex DNA analysis, latent fingerprint analysis, and firearms analysis from subjective (human read) to objective (machine read) analyses. *Id.* at 125.

¹¹ DOJ’s Forensic Science Discipline Review is studying the areas of forensic science in the PCAST Report, but uses a much more transparent procedure to solicit feedback and criticism from the stakeholders who will be impacted by any FSDR recommendations. The impact of the PCAST Report on the FSDR process is difficult to predict.

NIST has been working with the forensic science community to establish the Organization of Scientific Area Committees for Forensic Science (OSAC).¹² *Id.* at 126, 129-130. PCAST criticizes OSAC as being “dominated by forensic professionals” and “concludes that OSAC lacks sufficient independent scientific expertise and oversight to overcome the serious flaws in forensic science.” *Id.* at 126. It recommends that OSAC be restructured and specifies a new committee that should be formed within OSAC that would be composed entirely of non-forensic scientists and statisticians. *Id.* It also recommends that any standards under review by OSAC be made available without cost to, e.g., indigent defendants. *Id.*

The Report notes that funding for research in forensic science is “extremely small,” and recommends “[s]ubstantially larger funding...” *Id.* at 127. PCAST says the “President should request and Congress should provide” \$14 million more to NIST than is currently appropriated. *Id.* at 129.

2. The FBI Laboratory

PCAST recommends that the FBI increase the research community’s access to its forensic database. *Id.* at 132-33. It also recommends that the FBI’s Research and Development budget be “increased to a total of \$20 million”¹³ in order to facilitate an expanded research program. *Id.* at 135.

3. The Attorney General

The Report recommends that the DOJ “ensure that testimony about forensic evidence presented in court scientifically valid.” *Id.* at 136, 140. The Report suggests that DOJ: undertake a review of forensic feature-comparison methods (beyond those reviewed in this report) to identify which methods used by DOJ lack appropriate black-box studies necessary to assess foundational validity. Because such subjective methods are presumptively not established to be foundationally valid, DOJ should evaluate (1) whether DOJ should present in court conclusions based on such methods and (2) whether black-box studies should be launched to evaluate those methods.

Id. at 136.

The Report states that if there are “not adequate empirical studies and/or statistical models to provide meaningful information about the accuracy of a forensic feature-comparison method, DOJ attorneys and examiners should not offer testimony based on the method. If it is necessary to provide testimony concerning the method, they should clearly acknowledge to courts the lack of such evidence.” *Id.* at 141. **The corollary to this, based on the above, is that**

¹² NIST describes OSAC here: <https://www.nist.gov/forensics/organization-scientific-area-committees-forensic-science>.

¹³ Or perhaps \$30 million; the Report is inconsistent. *Compare id.* at 132 (\$20 million) *with id.* at 135 (“The President should request and Congress should provide increased appropriations to the FBI to restore the FBI Laboratory’s budget for forensic science research activities from its current level to \$30 million and should evaluate the need for increased funding for other forensic-science research activities in the Department of Justice.”).

PCAST is recommending that the DOJ not seek to introduce evidence from the following disciplines: DNA analysis of complex-mixture samples—particularly those done with Combined Probability of Inclusion methods—bitemarks, firearms identification, footwear analysis, and hair analysis.¹⁴

In underscoring why its recommendations should be followed, Report states, without citation to any source, that improper forensic testimony has “led to many wrongful convictions.” *Id.* at 140.

The Report then criticizes, again, the DOJ’s hair science review process and suggests that the DOJ’s proposed uniform language for testimony and report for forensic footwear and tire impressions “have serious problems.” *Id.* at 137-138. It then recommends that the Attorney General “revise and reissue for public comment” these proposals “to bring them into alignment with standards for scientific validity.” *Id.* at 140-141.

4. The Federal Judiciary

PCAST summarizes its recommendation to federal judges regarding “scientific criteria” for admissibility as follows:

Scientific validity and reliability require that a method has been subjected to empirical testing, under conditions appropriate to its intended use, that provides valid estimates of how often the method reaches an incorrect conclusion. For subjective feature-comparison methods, appropriately designed black-box studies are required, in which many examiners render decisions about many independent tests (typically, involving “questioned” samples and one or more “known” samples) and the error rates are determined. Without appropriate estimates of accuracy, an examiner’s statement that two samples are similar—or even indistinguishable—is scientifically meaningless: it has no probative value, and considerable potential for prejudicial impact. Nothing—not personal experience nor professional practices—can substitute for adequate empirical demonstration of accuracy.

Id. at 143.

While the Report purports to make only scientific, not legal recommendations, it is hard to view the “scientific criteria” as doing anything but requiring a legal conclusion regarding admissibility consistent with PCAST’s recommendations regarding “foundational validity.” Indeed, PCAST itself links “foundational validity” to Federal Rule of Evidence 702(c) and “validity as applied” to Rule 702(d). *Id.* at 145.

¹⁴ While the Report does not explicitly conclude that hair analysis lacks foundational validity, it strongly suggests that conclusion—and, in inviting the DOJ to do its own analysis, it is difficult to see where such an analysis under the PCAST “standards” would find hair analysis foundationally valid.

PCAST notes that, in seeking “advice from our panel of Senior Advisors” regarding whether to afford legal precedent any weight, it was “advised that the Supreme Court has made clear that a court may overrule precedent if it finds that an earlier case was ‘erroneously decided and that subsequent events have undermined its continuing validity.’” *Id.* at 144 n. 387, 144. In the Report, PCAST claims to “express[] no view on the legal question of whether any past cases were ‘erroneously decided.’” PCAST then states that, “from a scientific standpoint, subsequent events have indeed undermined the continuing validity of conclusions that were not based on appropriate empirical evidence,” thus **inviting federal judges to overrule settled precedent regarding the admissibility of DNA analysis of complex-mixture samples, bitemarks, firearms identification, footwear analysis, and hair analysis.** *Id.* at 144.

III. Responses to the Report

A. The U.S. Department of Justice

U.S. Attorney General Loretta Lynch has stated that the DOJ “will not be adopting the recommendations related to the admissibility of forensic science evidence.” The statement, which is released to media outlets when they seek a comment about the PCAST Report, reads in full:

Over the past several years, the Department of Justice has taken unprecedented steps to strengthen forensic science, including new investments in forensic science research, draft guidance to lab experts when they testify in court, and reviews of forensic testimony in closed cases. We remain confident that, when used properly, forensic science evidence helps juries identify the guilty and clear the innocent, and the Department believes that the current legal standards regarding the admissibility of forensic evidence are based on sound science and sound legal reasoning. We understand that PCAST also considered the issue of certain legal standards, alongside its scientific review. While we appreciate their contributions to the field of scientific inquiry, the Department will not be adopting the recommendations related to the admissibility of forensic science evidence.

B. The Federal Bureau of Investigation

The FBI has released a one-page response to the Report, available at <https://www.fbi.gov/file-repository/fbi-pcast-response.pdf/view>. In that response, it agrees with PCAST that “forensic science plays a critical role in the criminal justice system” and thus “needs to be held to high standards,” and that additional funding is needed to “develop stronger ties between the academic research community and the forensic science community.”

The FBI then criticizes both the Report’s “broad, unsupported assertions regarding science and forensic science practice,” and PCAST’s decision to “create[] its own criteria for scientific validity.” The response also notes, correctly, that PCAST doesn’t even apply this invented and subjective criteria “consistently or transparently” and that PCAST ignores “numerous published research studies which seem to meet PCAST’s criteria...”

C. The Media

The media response to the Report has taken the assertions and recommendations at face value. Articles and Op-Eds published this week include:

- “White House Advisory Council Report Is Critical of Forensics Used in Criminal Trials,” *Wall Street Journal*.¹⁵ The Report “sets the stage for criminal-defense challenges of long-held evidentiary methods and promises increased courtroom battles with prosecutors over the use of expert witnesses.”
- Judge (and PCAST Senior Advisor) Harry T. Edwards, “A wake-up call on the junk science infesting our courtrooms,” *Washington Post*.¹⁶ The Report “persuasively explains” that “bite mark analysis, firearms identification, footwear analysis and microscopic hair comparisons ... have not yet been proved to be reliable forms of legal proof.” Edwards adds “What is noteworthy about the new report is that it is written solely by eminent scientists who carefully assess forensic methods according to appropriate scientific standards.”
 - *Note*: this is likely to be the piece that resonates most with judges.
- “Obama’s science advisors: Much forensic work has no scientific foundation,” *Ars Technica*.¹⁷ “The report finds that all of the techniques have problems when it comes to operating on a firm scientific footing, so PCAST makes strong recommendations for how to get forensic science to take its name seriously.” (Also accepts Lander’s claim that the *Castro* case led to “reforms and analysis that eventually put the field on firm scientific footing”)

IV. Next Steps for Prosecutors

The Report is likely to lead to defense challenges regarding the admissibility of forensic evidence in “live” criminal cases and attacks on convictions—both as direct appeals and as collateral challenges.¹⁸ It is also likely to confuse the public, particularly given the one-sided treatment in the media of the recommendations it makes. That said, it could serve as a bit of a “call to arms” for prosecutors to jointly address the legal challenges to the admissibility of valid and reliable forensics evidence and to better inform themselves about the benefits and limits of forensic science.

¹⁵ <http://www.wsj.com/articles/white-house-advisory-council-releases-report-critical-of-forensics-used-in-criminal-trials-1474394743>

¹⁶ https://www.washingtonpost.com/opinions/a-wake-up-call-on-the-junk-science-infesting-our-courtrooms/2016/09/19/85b6eb22-7e90-11e6-8d13-d7c704ef9fd9_story.html?utm_term=.996c9e5cbee6

¹⁷ <http://arstechnica.com/science/2016/09/obamas-science-advisors-much-forensic-work-has-no-scientific-foundation/>

¹⁸ For example, the Report may be used to argue that a defense attorney who stipulated to the admissibility of—or did not vigorously attack—ballistics toolmark evidence was constitutionally ineffective.

A. Addressing Legal Challenges: A Preliminary Assessment

The Report’s legal analysis—while couched as a recommendation based on science—runs counter to settled caselaw regarding the admissibility of expert evidence. The analysis that follows is quite preliminary and does not purport to be an exhaustive review of the relevant legal standards or an assessment of how those standards have been applied throughout the states.

The Report suggests judges consider forensic evidence through a lens like that the Second Circuit rejected in *Jakobetz*: one that adds the additional element added by the judge in *Castro*—and one rejected by other courts throughout the land. The Report invites judges to usurp the role of jurors as factfinders—and, frankly, the role of defense counsel as informed partisans—by erecting “difficult hurdle[s]” that would “exclude[] highly relevant evidence simply because it is complicated.” *United States v. Jakobetz*, 955 F.2d 786, 796 (2d Cir. 1992). Moreover, while the Report cites *Daubert v. Merrell Dow Pharms.*, 509 U.S. 579 (1993), it does not properly describe the clear directions the Supreme Court provided to judges assessing the admissibility of expert testimony.

1. Daubert Standard

Federal courts and some state courts follow *Daubert* and Federal Rule of Evidence 702, which direct judges to apply “a more liberal standard of admissibility for expert opinions than did *Frye v. United States*, 293 F. 1013, 1014 (D.C. Cir. 1923),” *Williams*, 506 F.3d at 161-62 (quoting *Daubert*, 509 U.S. at 588). As a recent Second Circuit Court of Appeals summarized the *Daubert* test:

An expert witness is “permitted wide latitude to offer opinions, including those that are not based on firsthand knowledge or observation,” but only after a trial judge has determined “whether the expert is proposing to testify to (1) scientific knowledge that (2) will assist the trier of fact to understand or determine a fact in issue”...

Querub v. Moore Stephens Hong Kong, 15-2100 (Civ), 2016 U.S. App. LEXIS 9213 (2d Cir. N.Y. May 20, 2016) (unpublished) (quoting *Daubert*, 509 U.S. at 591-92).

As an example, the Second Circuit considered whether ballistics testimony—like that found by PCAST to lack “foundational validity”—was properly admitted by a trial court. *United States v. Williams*, 506 F.3d 151, 160-62 (2d Cir. 2007). The court below had denied the defendant’s request for a full-blown *Daubert* hearing regarding the testimony, and had instead ruled on the papers submitted by the parties, which included:

- citations by the Government to other recent decisions admitting similar evidence
- information from the Government about the expert’s training and experience, including her years spent examining firearms (12); her “hands-on training” from her supervisor; her attendance at seminars on firearms examiner; publication of her writings in a peer-reviewed journal; the number of firearms she’d examined (2,800); and her prior expert testimony on 20-30 occasions

Id. at 161. The Circuit easily concluded that the trial judge had fulfilled her gatekeeping function, given the information provided by the Government, and that there was no need for the “formality of a separate hearing.” *Id.*

2. *Frye* Standard

Other state courts apply the stricter *Frye* standard, including New York and Maryland. But as noted by the New York Court of Appeals in *Wesley*—and the Second Circuit in *Jakobetz*—even that standard does not erect the high hurdle proposed by the PCAST Report. *Wesley*, 83 N.Y.2d at 436; *Jakobetz*, 955 F.2d 794.

Under *Frye*, 293 F. 1013, scientific opinion testimony is admissible if the scientific principles involved are generally accepted in the relevant scientific community. The Criminal Practice Manual describes *Frye* as holding that: “expert testimony concerning scientific evidence must rest on a scientific principle that is demonstrably reliable and not still in the experimental stages[.]” 2 Crim. P. Man. §733:3 (LexisNexis 2016).

Frye states:

Just when a scientific principle or discovery crosses the line between the experimental and demonstrable stages is difficult to define. Somewhere in this twilight zone the evidential force of the principle must be recognized, and while courts will go a long way in admitting expert testimony deduced from a well recognized scientific principle or discovery, the thing from which the deduction is made must be sufficiently established to have gained general acceptance in the particular field in which it belongs.

293 F. at 1014. Thus, a ruling on admissibility under *Frye* distinguishes between the case-specific application of scientific principles and the underlying scientific principles themselves. It is not the expert’s opinion in a particular case, but rather “the thing from which the deduction is made [which] must be sufficiently established to have gained general acceptance in the particular field in which it belongs.” *Frye*, 293 F. at 1014.

For example, in Maryland, “an expert opinion must be based on a scientific method or principle that has gained general acceptance in the *relevant* scientific community.” *Ross v. Hous. Auth. of Balt. City*, 430 Md. 648, 660 n.10, (Md. 2013) (emphasis added). Even under this standard, as the Maryland Court of Appeals has held, “the validity and reliability of a scientific technique may be so broadly and generally accepted in the scientific community that a trial court may take judicial notice of its reliability. Such is commonly the case today with regard to ballistics tests, fingerprint identification, blood tests, and the like.” *Reed v. State*, 283 Md. 374, 391 A.2d 364 (1978) (adopting standard set forth in *Frye*).

Given that the PCAST Report is authored by scientists who are in no way members of the “relevant scientific community” in the disciplines they disavow, an argument can be made that none of their “findings” undercut the validity of, e.g., ballistics evidence. In many ways, the PCAST Members are akin to experts in mergers and acquisitions suggesting reforms to the

probable cause standard: they may be quite smart and well-versed in their field, but the fact that they happened to also be members of the same profession gives them no standing to dictate a sea change in areas in which they have no expertise.

B. Educating Prosecutors and Forensic Scientists

The PCAST Report has underscored the importance of prosecutors understanding the potential and limits of forensic science. The studies cited about bitemark analysis suggest that it is largely discredited—or “bad science.” As no good prosecutor ever wants an innocent person to be incarcerated based on faulty science—or any other inaccurate evidence—the PCAST Report can provide a useful stimulus for prosecutors to become informed about the proper use of forensic science in criminal investigations and trials.

As a result, the Report should stimulate conversations among federal, state, and local prosecutors about the legal issues in admitting forensics testimony—that is, how to thoughtfully address the inevitable “PCAST Motions” that will be made in an effort to remove valid and reliable evidence from jurors’ purview and to disturb settled verdicts. This highlights the need for trainings to ensure that prosecutors understand the scientific and logical support for, and factual bases of, forensic testimony they would seek to admit and defend.

Amie Ely wants to share PCAST

From: no-reply@sharepointonline.com
To: (b)(6) Ted Hunt (ODAG)
Cc: (b)(6) Ely @naag.org
Date: Fri, 20 Jul 2018 10:39:02 -0400

Link to share drive

From: Amie Ely <(b) (6)@naag.org>
To: "Hunt, Ted (ODAG)" <(b) (6)>
Date: Fri, 20 Jul 2018 10:40:03 -0400

(b) (6)

Materials are in the PCAST Responses folder.

RE: Amy Ely's response to PCAST

From: "Hunt, Ted (ODAG)" <(b) (6)>
To: Kristine Hamann <(b) (6)@pceinc.org>
Date: Fri, 15 Sep 2017 15:52:49 -0400

Thank Kri ,

Ye , thi i a good ummary/re pon e and I think I've een thi before not the one I wrote

Look forward to eeing you oon

Ted

From: Kristine Hamann [(b) (6)]@pceinc.org
Sent: Friday, September 1, 2017, 1:04 PM
To: Hunt, Ted (ODAG) <(b) (6)>
Subject: Amy Ely' re po

Hi Ted,

Here is Amy's response to the PCAST report. She has not widely disseminated it, but she has made it available to prosecutors.

I look forward to seeing you in DC.

Best,
Kris

Budowle PCAST

From: Ted Hunt <(b) (6)>
To: "Hunt, Ted (ODAG)" <(b) (6)>
Date: Sat, 30 Sep 2017 17:52:27 -0400
Attachment Budowle Re pon e to PCAST Report 06 17 2017 (002) pdf (618 37 kB)



June 17, 2017

To whom it may concern:

When the President's Council of Advisors on Science and Technology (PCAST) Report first was published in 2016, it was obvious that the report was not particularly helpful from a scientific perspective as it was myopic, full of error, and did not provide data to support its contentions. A more significant concern regarding the failings of the PCAST Report was that it claimed its focus was on science, but obviously was dedicated substantially to policy. Initially I considered writing a critique about the failings of the PCAST Report to assist the community. But the problems with this report were so obvious that I did not think it would be necessary to devote time to such an effort. Indeed my prediction was correct in that the report would be (and has been) rejected by the scientific community as well as overwhelmingly by the courts. However, the PCAST Report is being relied on by the Public Defender Service in U.S. v. Benito Valdez (Motion to Exclude the Testimony of the Government's proposed expert witness in Firearms Examination and Memorandum of Points and Authorities in Support, dated June 2, 2017) as a scientifically sound review of the state of the forensic sciences. Therefore, it has become necessary to address the serious limitations of the PCAST Report and convey that it is an unsound, unsubstantiated, non-peer-reviewed document that should not be relied upon for supporting or refuting the state of the forensic sciences.

My credentials to be able to opine on the failings of the PCAST Report are based on my work of more than 30 years in research, development, validation, and implementation of DNA typing methodologies for forensic applications (my CV is attached). I received a Ph.D. in Genetics in 1979 from Virginia Polytechnic Institute and State University. From 1979-1982, I was a postdoctoral fellow at the University of Alabama at Birmingham and carried out research predominately on genetic risk factors for such diseases as insulin dependent diabetes mellitus, melanoma, and acute lymphocytic leukemia. In 1983, I joined the research unit at the FBI Laboratory Division to carry out research, development, and validation of methods for forensic biological analyses. The positions I held at the FBI include: research chemist, program manager for DNA research, Chief of the Forensic Science Research Unit, and the Senior Scientist for the Laboratory Division of the FBI. I have contributed to the fundamental sciences as they apply to forensics in analytical development, population genetics, statistical interpretation of evidence, and in quality assurance. Some of my technical efforts have been: 1) development of analytical assays for typing myriad protein genetic marker systems, 2) designing electrophoretic instrumentation, 3) developing molecular biology analytical systems to include RFLP typing of VNTR loci and PCR-based SNP, VNTR and STR assays, and direct sequencing methods for mitochondrial DNA, 4) new technologies such as use of massively parallel sequencing; and 5) designing image analysis systems. I worked on laying some of the foundations for the current

statistical analyses in forensic biology and defining the parameters of relevant population groups. I have published approximately 600 articles (more than any other scientist in the area of forensic genetics), made more than 730 presentations (many of which were as an invited speaker at national and international meetings), and testified in well over 250 criminal cases in the areas of molecular biology, population genetics, statistics, quality assurance, validation, and forensic biology. In addition, I have authored or co-authored books on molecular biology techniques, electrophoresis, protein detection, forensic genetics, and microbial forensics. I was directly involved in developing the quality assurance standards for the forensic DNA field in the United States. I have been a chair and member of the Scientific Working Group on DNA Methods, Chair of the DNA Commission of the International Society of Forensic Genetics, and a member of the DNA Advisory Board. I was one of the original architects of the CODIS National DNA database, which maintains DNA profiles from convicted felons, from evidence in unsolved cases, and from missing persons.

Some of my efforts over the last 16 years also are in counter terrorism, including identification of victims from mass disasters, microbial forensics and bioterrorism. I was an advisor to New York State in the effort to identify the victims from the WTC attack. In the area of microbial forensics, I was the chair of the Scientific Working Group on Microbial Genetics and Forensics, whose mission was to set QA guidelines, develop criteria for biologic and user databases, set criteria for a National Repository, and develop forensic genomic applications. I also have served on the Steering Committee for the Colloquium on Microbial Forensics sponsored by American Society of Microbiology, was an organizer of four Microbial Forensics Meetings held at The Banbury Center in the Cold Spring Harbor Laboratory, and participated on several steering committees for NAS sponsored meetings.

In 2009 I became Executive Director of the Institute of Applied Genetics and Professor at the University of North Texas Health Science Center at Fort Worth, Texas. I currently direct the Center for Human Identification. I also direct an active research program in the areas of human forensic identification, microbial forensics, emerging infectious disease, human microbiome, molecular biology technologies, and pharmacogenetics (or molecular autopsy). I also currently am an appointed member of the Texas Forensic Science Commission.

Of note, the PCAST Committee relied on my work and as a noted expert which is supported by the report's citation of my work several times all in a favorable manner. Indeed, I am the scientist at the FBI that is mentioned as Dr. Lander's co-author to bolster his credentials in the forensic sciences (see footnotes 17 and 20). My work is cited in footnotes 33, 149, 183, 185, 187, and 209.

The report lacks scientific substance. It is cloaked with a veneer of science but in actuality is an attempt to set policy. The report discusses and advocates validation (a topic all should agree is important). Yet the topic is only addressed superficially providing definitions that already are well known with generalizations and terms it calls criteria. Nothing novel was provided by the report (see examples in references 1-7 that already have discussed the same criteria but to a greater degree than in the report). Moreover, the report does not provide any substantial guidance on how to perform validation studies for any of the disciplines it addresses. There are basic validation criteria such as sample size, power analyses, types of samples, sensitivity, specificity, dynamic range, purity of analyte, etc. that the report does not address per se or only touches upon (and instead uses black box studies for its only endeavor into sampling uncertainty and for a

misguided attempt at addressing the potential for error). The PCAST Committee could have done a service to the community if it had selected some validation studies that it claims to have reviewed (although such claims are suspect as there is no documentation supporting the claims) and described specifically those studies that the PCAST Committee deemed inappropriate and/or inadequate. Then, the PCAST Committee could have laid out how those studies should have been performed with the real substantive criteria and examples that are necessary to perform a validation study. Leading by example would have been helpful; instead the report just dismisses most of the work performed in 2000 plus articles that it claims (sic) to have reviewed. The report criticizes the forensic community for a lack of validation studies but does not describe what is lacking in any substantive way.

The Report does not describe data from each of the disciplines that could be relied upon. It is difficult to believe that in 2000 papers, the PCAST Committee claims to have relied upon, that there are no data of value. There are no indications that the PCAST Committee actually assessed the data in the literature. There is little if any documentation in this regard which should be extremely troubling to all given the PCAST Committee's strong positions of the importance of validation, documentation, and peer-reviewed publication for the forensic science community. The PCAST Committee clearly takes a "do as I say, not as I do" position. The report contains no discussion on the criteria that were used to assess the literature, the criteria that were used to dismiss the literature as inadequate, and no documentation that any data (if existing) are readily available to support that the PCAST committee performed a sound, full and complete review. Again, these issues are most disconcerting because it is apparent that the PCAST Committee in its undertaking did not hold itself up to the same standards of validation, documentation, and peer-review that it espouses the forensic community should embrace (compounded as a number of the criticisms in the report are unfounded). The report provides some guidance on basic statistics, such as estimating false positive rates (which are not novel). However, this lecturing on proper statistics is troubling to say the least as the report misuses statistics in its own cursory efforts.

The following are examples from the report to support my above claims. They are not comprehensive as it is unnecessary to go page-by-page to indicate the serious problems with the PCAST Report. A few examples should suffice to demonstrate why this report has been so underwhelming and been ignored by most scientists and the courts. In pointing out the failings of the report I will focus on topics that transcend the disciplines and specifically on my area of expertise, i.e., DNA; I could not adequately address the other disciplines and what data do or do not exist in those forensic science areas. I leave specifics of other disciplines to those with requisite expertise. However, I stress that since the report misinforms on forensic DNA applications, which is considered the "gold standard" and well-documented in the scientific literature (even the report acknowledges that), then there is a strong indication that perhaps the report missed the mark on the other disciplines as well.

I take the position that improvements in forensic sciences are needed. Indeed, all science continues to improve. It is never static. In my field of DNA typing, I and others have been and currently are working on developing better/improved methods, such as the use of next generation sequencing and new software tools. It would be improper to say that any method is perfect and cannot be made better. That position, though, is not a wholesale condemnation of the forensic sciences. Each discipline, or better yet each application, should be assessed in context as a holistic system (not solely based on validation as the report seemingly myopically espouses) and

the types/quality of samples encountered in specific cases. The report's generalization of issues avoids addressing an extremely important question – was the analysis/interpretation in this case performed correctly?

The first two examples presented below are particularly egregious and point to the dearth of substance in the report. The report states on page 2

“In the course of its study, PCAST compiled and reviewed a set of more than 2,000 papers from various sources—including bibliographies prepared by the Subcommittee on Forensic Science of the National Science and Technology Council and the relevant Working Groups organized by the National Institute of Standards and Technology (NIST); submissions in response to PCAST's request for information from the forensic-science stakeholder community; and PCAST's own literature searches.”

On page 67 of the report it is stated

“PCAST compiled a list of 2019 papers from various sources—including bibliographies prepared by the National Science and Technology Council's Subcommittee on Forensic Science, the relevant Scientific Working Groups (predecessors to the current OSAC), and the relevant OSAC committees; submissions in response to PCAST's request for information from the forensic-science stakeholder community; and our own literature searches.”

There were two citations to support the review of the 2000 or so papers that the PCAST relied upon:

www.nist.gov/forensics/workgroups.cfm.

www.whitehouse.gov/sites/default/files/microsites/ostp/PCAST/pcast_forensics_references.pdf.

Neither of these sites appear to show (or allow for ready identification) what those articles were that the PCAST Committee reviewed and then relied upon. More so, there are no criteria and no data in the report or at these sites on what the PCAST Committee actually read, noted, reviewed, quantified, calculated, accepted, rejected, and/or debated. The report advocates emphatically and repeatedly the virtues of validation, documentation, and peer-review. Yet the report does not contain such information and thus does not meet as a minimum the requirements that it lambasted the forensic science community for lacking. This inconsistency between recommended requirements and lack of performance by the PCAST Committee is most noted as there is substantial documentation in the forensic science community (in many disciplines) but not in this report.

This lack of documentation should be considered in light of the report's statements on pages 1 and 22

“PCAST concluded that there are two important gaps: (1) the need for clarity about the scientific standards for the validity and reliability of forensic methods and (2) the need to

evaluate specific forensic methods to determine whether they have been scientifically established to be valid and reliable.”

The report also states on pages 4 and 21

“It is the proper province of the scientific community to provide guidance concerning scientific standards for scientific validity, and it is on those *scientific* standards that PCAST focuses here.”

Yet the PCAST Committee did not provide its data to support the validity of its own work. There simply is no accounting of the PCAST Committee’s work to demonstrate it assessed the 2000 papers and how it came to the conclusions it rendered.

This evident failing is exacerbated by the reports statement on page 6

“The forensic examiner must have been shown to be *capable* of reliably applying the method and must *actually* have done so. Demonstrating that an expert is *capable* of reliably applying the method is crucial—especially for subjective methods, in which human judgment plays a central role. From a scientific standpoint, the ability to apply a method reliably can be demonstrated only through empirical testing that measures how often the expert reaches the correct answer. Determining whether an examiner has *actually* reliably applied the method requires that the procedures actually used in the case, the results obtained, and the laboratory notes be made available for scientific review by others.”

No one knows what method(s) the PCAST Committee used; but it is clear that it did not hold itself to the same standard either by *capability* or *actually* performing. This report cannot be held up for scientific review (as indicated on page 6 of the report – see immediately above). There are no notes or results available.

As the report says repeatedly (see pages 6 and 32)

“We note, finally, that neither experience, nor judgment, nor good professional practices (such as certification programs and accreditation programs, standardized protocols, proficiency testing, and codes of ethics) can substitute for actual evidence of foundational validity and reliability.”

The academic and professional standings of the PCAST Committee members are not a substitute for good practices (none of which are documented). No one should take seriously this report because it has little substance to support its contentions.

The second most egregious example is the misuse and disregard for statistics. It may appear to the casual observer that the PCAST Committee is steeped in statistics and thus all statistics presented must be meaningful. For example, the report dedicates Appendix A for some discussion on statistics. But this guidance is rather basic and not particularly helpful to guide the community for any specific discipline or application. Yet when it comes to substance the PCAST Committee fails again which is evident in its own use of statistics. Consider the statements in the report on page 3

“Reviews by the National Institute of Justice and others have found that DNA testing during the course of investigations has cleared tens of thousands of suspects and that DNA-based re-examination of past cases has led so far to the exonerations of 342 defendants. Independent reviews of these cases have revealed that many relied in part on faulty expert testimony from forensic scientists who had told juries incorrectly that similar features in a pair of samples taken from a suspect and from a crime scene (hair, bullets, bitemarks, tire or shoe treads, or other items) implicated defendants in a crime with a high degree of certainty.”

Then on page 26

“DNA-based re-examination of past cases, moreover, has led so far to the exonerations of 342 defendants, including 20 who had been sentenced to death, and to the identification of 147 real perpetrators.”

A similar statement is found on page 44 (footnote 94). These findings appear to support the assertion on page 44 of the report

“It is *important* because it has become apparent, over the past decade, that faulty forensic feature comparison has led to numerous miscarriages of justice.”

I do not dispute that there have been 342 post-conviction exonerations. I am not sure what the number of exonerations is when the report says “many relied in part on faulty expert testimony” – because the report does not quantify what is meant by many. However, one wrongful analysis or testimony is one too many, and every effort should be made to minimize forensic science errors. The exoneration of 342 convicted felons is serious and topic in its own right (and again way too many). But this number is statistically meaningless and out of context. The PCAST Committee should have recognized this obvious aspect of the use of numbers. The PCAST Committee did not perform any statistical analyses or even appear to collect the data necessary to put these numbers in proper perspective. The PCAST Committee should have identified how many cases in total that have been reviewed to date (especially given that the report discusses the proper way to calculate a false positive rate, the Committee does not follow through with the same verve). This number of 342 may be and is likely a very small percentage of the total number of cases reviewed, especially since the innocence project has been around for 25 years (see <https://25years.innocenceproject.org/>). Moreover, the PCAST Committee did not convey how many post-conviction analyses that have been performed over the past 25 years in which there was no evidence of improper scientific performance, findings or faulty testimony. It would seem that such obvious basic information eluded the PCAST Committee. Those cases that were reviewed over the past 25 years in which no misuse of forensic science analyses were detected would indicate that perhaps the forensic science field is not so scientifically corrupt as the report implies. More so it would indicate that proper results can be obtained (at least most of the time).

The report discusses error rates substantially using statements such as on page 6

“Similarly, an expert’s expression of *confidence* based on personal professional experience or expressions of *consensus* among practitioners about the accuracy of their field is no substitute for error rates estimated from relevant studies.”

The PCAST Report also recommends

“For subjective feature-comparison methods, because the individual steps are not objectively specified, the method must be evaluated as if it were a “black box.”

Smrz et al (8) (a paper of which I am a co-author) recommended the black box approach after the review of the FBI Laboratory’s latent print misidentification related to the Madrid bombing incident, and the PCAST Report advocates the use of such black box studies. I concur that a black box approach has some value but strongly caution that one must consider the proper utility of such studies. The authors of the PCAST Report calculated upper bound error rates based on the results of the very few black box studies they discuss; the PCAST Committee seemingly implies that these upper bound error rates are somehow meaningful to report in every case analysis. A black box study can demonstrate generally whether or not a method can yield reliable results where a human is substantially involved in the interpretation of results. But it does not necessarily help address error that may or may not have occurred during a specific case analysis.

There are several problems with such a simplistic generalization that the authors of the PCAST Report have taken regarding use of black box studies. A black box study only tests those individuals involved in the study. Therefore, the performance of the rest of the analysts of the forensic science community is not covered by the study, and the results of the study may not apply to those analysts. Some individuals perform better than others in black box studies. The average rate inflates the performance of the poorer analysts and deflates the performance of the better analysts tested in the study. Therefore, the error rate values calculated by the PCAST authors likely do not apply to most analysts. Moreover, the information content and quality of results from a forensic science analysis vary from sample to sample. Treating all sample results equally and applying a single error rate does not convey the chance for error in a particular analysis. As the PCAST Report states (see below) DNA mixture interpretation is more challenging than interpretation of single source DNA profiles. If the PCAST Committee recognizes that differences in the quality of DNA evidence affect difficulty of interpretation, then the PCAST Committee should have been able to realize that the same holds for black box study results and different quality evidence (another obvious inconsistency in the report).

A known error rate or proficiency test mistake is at best some indirect measure of the verity of the proposed results in any given sample analysis, but can never be a direct measure of the reliability of the specific result(s) in question (9). Consider a hypothetical crossing of a street where there is a 1% error (arbitrary for sake of discussion) of being hit by a car. At the beginning of the journey crossing the road there is a 1% error of being hit. While crossing the road the chance can increase or decrease depending on circumstances (possibly being greater at the center of the road and less within lanes). If the individual successfully crosses the road, then the error drops to zero. Of course, different roads (such as a busy interstate vs a rural back road) have different *a priori* chances of error (i.e., similar to the quality of evidence affects the degree of difficulty). Ultimately the issue of crossing the road is did the individual successfully cross the road or get hit. The same holds for casework, i.e., is there an error or is there not an error in the performance or analysis. Given that the black box studies mentioned in the report did have a good degree of success, there is support that a process can generate a reliable result. Thus it still comes back to determining if an error of consequence was committed in a specific case. Oddly not mentioned in the PCAST Report is that most of the forensic disciplines addressed carry out non-consumptive forms of examination. Therefore, the most direct way to measure the truth of

the purported results is to have another expert conduct his/her own review, as is advocated by the National Research Council Report II for DNA analyses (10). Re-analysis would be more meaningful instead of espousing hypothetical error rates, which may not apply to the actual results and/or analysts involved. Indeed, the above mentioned black box studies and the missing data on total number of cases from innocence project case reviews do support that tests can yield reliable results but that most of the problems (as discussed below for DNA mixtures) have been due to misapplication. Therefore, case peer-review can be an effective approach to identify misapplications. However, the PCAST Report seems to ignore the value of this practice which demonstrates the reports myopic assessment of the forensic sciences and lack of consideration of a holistic systems approach.

The PCAST Report singles out validation as essentially the sole basis for reliability. Instead under a systems approach there are several components that impact an outcome, and the reliance on these several features increases validity and reliability in any one case. Quality performance is an essential component for obtaining reliable results and for reducing the chance of error. Quality assurance provides an infrastructure to promote high performance, address errors that arise, and improve processes. In addition to validation studies, there are other mechanisms such as technical review of a case that reduce error. This technical review is performed within the laboratory before issuing a report and also outside the laboratory when an expert witness is acquired by the opposing side to assess results and interpretations. The PCAST Report seems to ignore the value of these additional quality measures and the strength of the adversary system. Error rates are difficult to calculate; they are fluid. When an error of consequence (i.e., a false “match”) occurs, under a sound quality assurance program corrective action is taken (to include review of cases analyzed by the examiner prior to and post the discovery of the error). When the corrective action is such that the individual will no longer commit that error, it no longer impacts negatively on the individual’s future performance. In fact, he/she is better educated and less likely to err. The calculation of a current error rate then should not include past error(s). Having said that, past error should not be ignored; if desired, it could be raised in court or other deliberations. The defense (or prosecution), if it believes it useful, should make use of such information during a cross-examination of an expert. But the PCAST Report does not address the shortcomings of the calculated error rate as it uses it; it treats the upper bound error rate calculation from black box studies as if they are robust and specific (which they are not).

Notably the PCAST Report tends to dismiss experience and judgment, implying it has little value. I agree that experience and judgment standing alone should be considered with caution. However, the vast majority of forensic science disciplines work in a systems approach, i.e., many facets to the process; experience is but one factor among several to effect a quality result. Even though the PCAST Report dismisses experience it again shows its inconsistencies about the province of experience. Consider the following statements on page 55 of the report

“In some settings, an expert may be scientifically capable of rendering judgments based primarily on his or her “experience” and “judgment.” Based on experience, a surgeon might be scientifically qualified to offer a judgment about whether another doctor acted appropriately in the operating theater or a psychiatrist might be scientifically qualified to offer a judgment about whether a defendant is mentally competent to assist in his or her defense.”

“By contrast, “experience” or “judgment” cannot be used to establish the scientific validity and reliability of a metrological method, such as a forensic feature-comparison method. The frequency with which a particular pattern or set of features will be observed in different samples, which is an essential element in drawing conclusions, is not a matter of “judgment.” It is an empirical matter for which only empirical evidence is relevant. Moreover, a forensic examiner’s “experience” from extensive casework is not informative—because the “right answers” are not typically known in casework and thus examiners cannot accurately know how often they erroneously declare matches and cannot readily hone their accuracy by learning from their mistakes in the course of casework.”

Even to a lay person these statements should be obviously inconsistent, troubling and point to the inadequacy of the PCAST Committee addressing the topic of forensic science reliability. I fail to see why the medical and psychology fields can have another expert review another’s work (on what may be life and death decisions) and opine on the analyses/interpretations; yet a qualified forensic science analyst cannot perform a technical review of forensic work to assess analyses/interpretations (especially since the report has ignored data that support that at some level forensic testing is reliable). The logic of the PCAST Committee escapes me.

The PCAST Report discusses DNA typing and the limitations that have been encountered with mixture interpretation. For example on page 75 the report states

“DNA analysis of complex mixtures—defined as mixtures with more than two contributors—is inherently difficult and even more for small amounts of DNA.”

I concur that it is more challenging to interpret DNA mixtures compared with single-source DNA profiles. But the report fails to add that difficult does not necessarily translate into impossible or that proper interpretations can be made. The difficulties with mixture interpretation were not due to a lack of good, valid approaches to employ as there were valid approaches and also not due to the fact that there is some subjective judgment with interpretations. The issue, and it is a serious one, was that many of the practitioners in the forensic DNA community were inadequately trained, did not seek out solutions, or instead chose to wait for guidance (see pages 77-78 of the PCAST report and discussion on Texas and mixture interpretation). These issues were similar to the mixture interpretation problems at the Department of Forensic Sciences in Washington, DC (in which I was the scientist who identified the problems).

The PCAST Report assails the use of the Combined Probability of Inclusion (CPI) which is one of the methods used by the community and endorsed by the DNA Advisory Board (11) 17 years ago. However, the discussion of the Texas Forensic Science Commission (TFSC) (of which I was deeply involved in the review of mixture interpretation for the State) and how it pursued and addressed inappropriate interpretation of mixtures actually implies that valid methods do exist; otherwise how could a group of international experts (of which I was one of the experts) assess the situation, determine that there are problems in the application of interpretation guidelines, and provide guidance to the community to implement sound procedures?

The PCAST Committee on page 78 of the report states

“The TFSC also convened an international panel of scientific experts—from the Harvard Medical School, the University of North Texas Health Science Center, New Zealand’s

forensic research unit, and NIST—to clarify the proper use of CPI. These scientists presented observations at a public meeting, where many attorneys learned for the first time the extent to which DNA-mixture analysis involved subjective interpretation. Many of the problems with the CPI statistic arose because existing guidelines did not clearly, adequately, or correctly specify the proper use or limitations of the approach.”

The report properly focuses on lack of detailed guidelines on interpretation and does not suggest that the principles of how to calculate the CPI are erroneous. Indeed, nowhere in the report are there any data to indicate that the CPI is foundationally erroneous.

Yet, the report then states on page 78

“In summary, the interpretation of complex DNA mixtures with the CPI statistic has been an inadequately specified—and thus inappropriately subjective—method. As such, the method is clearly not foundationally valid.”

The allegation that the CPI is not foundationally valid demonstrates the lack of understanding (and again the lack of documentation of review) by the PCAST Committee. In fact, these statements also demonstrate another report inconsistency – this time about the principles of statistical calculations related to DNA profiles. On page 72 the report states

“The process for calculating the random match probability (that is, the probability of a match occurring by chance) is based on well-established principles of population genetics and statistics.”

The random match probability is one approach to calculating a statistic for single-source samples and appears to be endorsed by the PCAST Committee as well-established and thus valid. Yet, the PCAST Committee takes the opposite position for the CPI stating it is not foundationally valid. If one reads my colleagues and my most recent paper on the CPI (12), cited in the PCAST Report, it is clear that the principles of the foundational validity of the CPI are the same as those for the random match probability. Consider a similar situation which is the chance of drawing four aces in a row from a standard deck of cards is estimated to be 1 in 270,275. This value is based on probability theory and does not require an empirical testing to be published in the peer reviewed literature to support its validity. The CPI and random match probability use the same population frequency data and the same well-established principles of population genetics and statistics. While this is another example of myopia by the PCAST Committee, it borders on the bizarre that the PCAST Committee failed to understand the foundations of DNA statistics.

All know the PCAST Committee had access to the most recent paper on the use of the CPI (and the references within that paper) as it is stated on page 78 of the report

“Because the paper appeared just as this report was being finalized, PCAST has not had adequate time to assess whether the rules are also *sufficient* to define an objective and scientifically valid method for the application of CPI.”

I note that the CPI is a rather simple concept and its foundations are basic. It is surprising that the PCAST Committee, which touts its vast expertise, could not readily assess the paper. Given the importance of their report and this topic it also is surprising that they would not have done so before finalizing their report.

The PCAST Report recognizes that probabilistic genotyping is an advancement to improve or reduce subjectivity in DNA mixtures (see page 79). I concur. But the report states on page 79

“Appropriate evaluation of the proposed methods should consist of studies by multiple groups, *not associated with the software developers*, that investigate the performance and define the limitations of programs by testing them on a wide range of mixtures with different properties.”

Also the report states on page 81

“Because empirical evidence is essential for establishing the foundational validity of a method, PCAST urges forensic scientists to submit and leading scientific journals to publish high-quality validation studies that properly establish the range of reliability of methods for the analysis of complex DNA mixtures.”

Publication is part of the peer-review process and I support publication by the developers and others who adopt the method. But the PCAST Committee has placed a requirement that is unrealistic to meet which is publication by the user laboratories. It is likely that a few at most laboratories will be able to publish their validation testing of the software. Anyone who serves on editorial boards of scientific journals should know that journals are unlikely to publish additional studies because they are not considered novel. Yet, the PCAST Committee failed to recognize this fact.

It is important to stress that the report contains no criticisms of probabilistic genotyping and still there are no data contained in the report that demonstrate that the PCAST Committee actually reviewed (or better yet tested) the current probabilistic genotyping software programs (even though it claims to have done extensive review, such as the undocumented 2000 papers).

Forensic laboratories are required to perform validation studies, and there are substantial data on mixtures that support the validity of mixture interpretation and use of probabilistic genotyping. Mixture studies are required to be performed by every laboratory engaged in analyzing such evidence as part of their validation studies. Many of these studies lack novelty and thus will never be published in peer-review journals. However, the PCAST Committee could have contacted a number of forensic DNA laboratories who have implemented one of the probabilistic genotyping software programs (as there were laboratories operating or near implementation of the tools at the time of the report’s publication) to gain access to the validation data to determine whether there are sufficient data to support the already peer-reviewed published work. There is no indication that the PCAST Committee made any effort to become informed to opine on the reliability and validity of probabilistic genotyping.

The PCAST Committee simply ignored a wealth of validation data residing in crime laboratories. If the PCAST Committee had taken a holistic approach, they would have considered the totality of data in determining whether there is support for the validity and reliability of probabilistic genotyping. Peer-review publications by the developers and validation data by the users combined clearly support the software and its applications. Indeed, this failure of the PCAST Committee of not considering all available data is reminiscent of a similar situation that occurred 25 years ago with another report – the National Research Council I Report (NRC I) (13). The NRC I Report proposed a non-scientific, *ad hoc* way to calculate statistics called the ceiling principle. The ceiling principle had no genetics foundation or validity and was roundly rejected. One of the bases for the proposed ceiling principle approach (espoused by the NRC I Committee) was a lack of population data. There were substantial population data in crime

laboratories world-wide at the time the NRC I Report was published; but the NRC I Committee did not seek out the data. As soon as the NRC I Report was published, I reached out to my colleagues around the world and gathered the existing data which were then compiled into a five volume compendium (14). If the NRC I Committee had chosen to consider extant population data, they might have prepared a more informed Report. The outcome was that the National Academy of Sciences convened a second committee and produced the sound NRC II Report (10), which was steeped in fundamental population genetics and statistical applications. The findings of the NRC II Report in part were based on the data I compiled in the five volume compendium which were available prior to the publication of the rejected NRC I Report. The PCAST Report has taken the same blinded approach and ignored extant data with a similar outcome as 25 years ago – a report that provides little value for assessing the state-of-the-art and even less value for providing guidance to improve the forensic sciences.

In conclusion, the few examples above demonstrate that the PCAST Report 1) is **not** scientifically sound, 2) is **not** based on data, 3) is **not** well-documented, 4) misapplies statistics, 5) is full of inconsistencies, and 6) does **not** provide helpful guidance to obtain valid results in forensic analyses.

References

1. Budowle, B. and SWGMGF Members: Quality assurance guidelines for laboratories performing microbial forensic work. *Forens. Science Communications* October 5(4): 2003, At: www.fbi.gov/hq/lab/fsc/current/2003_10_guide01.htm.
2. Budowle, B., Schutzer, S.E., Einseln, A., Kelley, L.C., Walsh, A.C., Smith, J.A.L., Marrone, B.L., Robertson, J., and Campos, J.: Building microbial forensics as a response to Bioterrorism. *Science* 301: 1852-1853, 2003.
3. Budowle, B., Schutzer, S.E., Morse, S.A., Martinez, K.F., Chakraborty, R., Marrone, B.L., Murch, R.S., Jackson, P.J., Williamson, P., Harmon, R., and Velsko, S.P.: Guidance for validation in microbial forensics. *Applied and Environmental Microbiology* 74:5599-5607, 2008.
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5. The FBI Director's Forensic Quality Assurance Standards for DNA Testing Laboratories, http://media.wix.com/ugd/4344b0_4a22824ce56f43d4b1a4d2486409f95d.pdf
6. SWGDAM Validation Guidelines for Forensic DNA Analysis Methods, https://docs.wixstatic.com/ugd/4344b0_813b241e8944497e99b9c45b163b76bd.pdf
7. SWGDAM Guidelines for the Validation of Probabilistic Genotyping Systems, https://docs.wixstatic.com/ugd/4344b0_22776006b67c4a32a5ffc04fe3b56515.pdf

8. Smrz, M.A., Burmeister, S.G., Einseln, A., Fisher, C.L., Fram, R., Stacey, R.B., Theisen, C.E., and Budowle, B.: Review of FBI latent print unit processes and recommendations to improve practices and quality. *J. Forens. Ident.* 56(3):402-434, 2006.
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11. Statistical and Population Genetics Issues Affecting the Evaluation of the Frequency of Occurrence of DNA Profiles Calculated From Pertinent Population Database(s), DNA Advisory Board, *Forensic Science Communications* 2(3), 2000, <https://archives.fbi.gov/archives/about-us/lab/forensic-science-communications/fsc/july2000/dnastat.htm>
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13. NRC I Report, The Evaluation of Forensic DNA Evidence, 1992, <https://www.nap.edu/read/5141/chapter/1#ii>
14. Federal Bureau of Investigation: VNTR Population Data: A Worldwide Study, Volumes I-IV, Forensic Science Research and Training Center, FBI Academy, Quantico, Virginia, 1993.

I declare under penalty of perjury that the forgoing is true and correct to the best of my knowledge.



Bruce Budowle, Ph.D.
Director
Center for Human Identification
University of North Texas Health Science Center
Fort Worth, Texas 76107
Email: (b) (6) @unthsc.edu
Tel: (b) (6)

Draft

From: "Hunt, Ted (ODAG)" <(b) (6)>
To: (b) (6) Ted Hunt
Date: Fri, 25 Aug 2017 19:11:58 -0400
Attachment: DRAFT doc (12 33 kB)

Ted R. Hunt
Senior Advisor on Forensic Science
Office of the Deputy Attorney General
United States Department of Justice
950 Pennsylvania Ave, NW
Washington, D.C. 20530

(b) (6)
(U) (0)

RE: Upcoming Travel

From: "Hunt, Ted (ODAG)" <(b) (6)>
To: "Brinkley, Winnie (ODAG)" <(b) (6)>
Date: Wed, 27 Sep 2017 17:07:16 -0400
Attachment 171026 Hunt TravAuth Bo ton MA doc (13 43 kB); 171023 Hunt TravAuth Philadelphia doc (13 32 kB)

Winnie,

My revisions to the travel requests are attached above.

Thank ,

Ted

From: Brinkley, Winnie (ODAG)
Sent: Wednesday, September 27, 2017 4:07 PM
To: Hunt, Ted (ODAG) <(b) (6)>
Subject: Upcoming Travel

Ted,

I have drafted the travel authorization memos for your trip to Philadelphia and Boston. Please review and make any necessary edits.

Also, here are the train options for October 23:

Washington to Philadelphia

184 Northeast Regional departs at 9:20am and arrives 11:12am
174 Northeast Regional departs at 10:10am and arrives 12:01pm.

Philadelphia to Washington

93 Northeast Regional departs at 3:27pm and arrives 5:15pm.
19 Crescent departs at 3:55pm and arrives 5:55pm
85 Northeast Regional departs at 4:30pm and arrives 6:25pm.
173 Northeast Regional departs at 4:55pm and arrives 6:51pm.

Winnie Brinkley
Staff Assistant
U.S. Department of Justice
Office of the Deputy Attorney General
950 Pennsylvania Avenue NW
Washington, D.C. 20530
Tel: (b) (6) (direct)
Fax: (202) 507-0097

October 2, 2017

MEMORANDUM

TO: James Crowell
Chief of Staff and
Associate Deputy Attorney General
Office of the Deputy Attorney General

FROM: Ted R. Hunt
Senior Advisor to the Attorney General on Forensic Science
Department of Justice
Office of the Deputy Attorney General

SUBJECT: Travel Authorization for Boston, Massachusetts – October 26-27, 2017

I am attending a symposium sponsored by the Advisory Committee on the Federal Rules of Evidence to be held in Boston on October 27. The purpose of the symposium is to discuss whether FRE 702 should be amended, a separate rule drafted for forensic science, a note to the rule be added, or a best practice manual drafted for the judiciary. I am on a panel and will provide the Department's view on the PCAST Report. A preparation meeting with other Department speakers at the symposium will occur at the U.S. Attorney's Office in Boston the day before the symposium, on October 26.

This trip will be paid for by the Deputy Attorney General's Office. The estimated expenses are \$1,500.00 which will include: airfare, lodging, meal per diem, and miscellaneous. There is a conference registration fee of \$500.00 to be paid by the Deputy Attorney General's Office. My plan is to depart October 26, and return October 27, 2017.

Please let me know if you have any questions.

APPROVE: _____

DISAPPROVE: _____

OTHER: _____

Attachment(s)

October 2, 2017

MEMORANDUM

TO: James Crowell
Chief of Staff and
Associate Deputy Attorney General
Office of the Deputy Attorney General

FROM: Ted R. Hunt
Senior Advisor to the Attorney General on Forensic Science
Department of Justice
Office of the Deputy Attorney General

SUBJECT: Travel Authorization for Philadelphia, Pennsylvania – October 23, 2017

I have been invited to a meeting with law enforcement representatives from IACP, ASCIA, and MCCA on forensic science to be held in Philadelphia on October 23. This meeting is designed to gather information for the forensic science needs assessment (and subsequent Report) announced by the DAG during his speech to the IAI in Atlanta this past August. This meeting is being facilitated by the Office of Legal Policy (OLP) and NIJ.

This trip will be paid for by the Deputy Attorney General's Office. The estimated expenses are \$500.00 which will include: train fare, meal per diem, and miscellaneous. My plan is to depart and return on October 23, 2017.

Please let me know if you have any questions.

APPROVE: _____

DISAPPROVE: _____

OTHER: _____

Attachment(s)

DRAFT Remarks

From: "Hunt, Ted (ODAG)" <(b) (6)>
To: "Crowell, James (ODAG)" <(b) (6)>, "Hur, Robert (ODAG)" <(b) (6)>
Date: Fri, 15 Sep 2017 11:22:58 -0400
Attachment DRAFT Remark KBI KS AG Meeting Sept 20 doc (46 27 kB)

Jim/Rob:

Attached above are draft remarks that I've prepared for a talk I'm giving next week (Wednesday) to the Kansas Bureau of Investigation and the Kansas Attorney General's Office at the KBI's new lab in Topeka, KS.

These remarks have already been reviewed by OLP. Note that they contain a couple references to the PCAST Report, and that these are ODAG's first public comments on that Report.

Please let me know if you have any questions or comments.

Thanks,

Ted

Ted R. Hunt
Senior Advisor to the Attorney General on Forensic Science
Office of the Deputy Attorney General
United States Department of Justice
950 Pennsylvania Ave, NW
Washington D.C. 20530

(b) (6)
(b) (6)

Bode Presentation

From: "Hunt, Ted (ODAG)" <(b) (6)>
To: "Hunt, Ted (ODAG)" <(b) (6)>
Date: Mon, 02 Apr 2018 11:35:39 -0400
Attachment: FINAL Department of Justice Update on Forensic Initiative ppt (3.98 MB)

Ted R. Hunt
Senior Advisor to the Attorney General on Forensic Science
Office of the Deputy Attorney General
United States Department of Justice
950 Pennsylvania Ave. NW
Washington, DC 20530

(b) (6)
(U) (0)

Bode PPT

From: "Hunt, Ted (ODAG)" <(b) (6)>
To: (b) (6) Ted Hunt
Date: Thu, 29 Mar 2018 18:40:48 -0400
Attachment: FINAL Department of Justice Update on Forensic Initiative ppt (3.4 MB)

Ted R. Hunt
Senior Advisor to the Attorney General on Forensic Science
Office of the Deputy Attorney General
United States Department of Justice
950 Pennsylvania Ave. NW
Washington, DC 20530

(b) (6)
(b) (6)

Final Bode Presentation

From: "Hunt, Ted (ODAG)" <(b) (6)>
To: (b) (6) Ted Hunt
Date: Tue, 03 Apr 2018 11:00:25 -0400
Attachment: FINAL Department of Justice Update on Forensic Initiative ppt (4.13 MB)

Ted R. Hunt
Senior Advisor to the Attorney General on Forensic Science
Office of the Deputy Attorney General
United States Department of Justice
950 Pennsylvania Ave. NW
Washington, DC 20530

(b) (6)
(b) (6)

FINAL BODE SLIDES

From: "Hunt, Ted (ODAG)" <(b) (6)>
To: (b) (6) Ted Hunt
Date: Tue, 03 Apr 2018 23:18:10 -0400
Attachment: FINAL Bode 2018 Slide ppt (4.43 MB)

Ted R. Hunt
Senior Advisor to the Attorney General on Forensic Science
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Department of Justice

Update on Forensic Initiatives



Ted R. Hunt

**Senior Advisor to the Attorney General on Forensic Science
United States Department of Justice**

Focus on 3 Critical Areas

I. Increasing **Coordination and Collaboration** on Forensic Science

II. Increasing the **Capacity** of Forensic Service Providers

III. Improving the **Validity & Reliability** of Forensic Analysis

I. Increasing **Coordination and Collaboration** on Forensic Science

- **Within the Department**
- **Across the Federal Government**
- **With State, Local, & Tribal Entities**



Appointment

Senior Advisor on Forensic Science



JUSTICE NEWS

Department of Justice

Office of Public Affairs

FOR IMMEDIATE RELEASE

Monday, April 10, 2017

Attorney General Jeff Sessions Announces New Initiatives to Advance Forensic Science and Help Counter the Rise in Violent Crime

As part of the Department's efforts under the Task Force on Crime Reduction and Public Safety (Task Force), Attorney General Jeff Sessions today announced a series of actions the Department will take to advance forensic science and help combat the rise in violent crime.

These actions are being undertaken on the expiration of the National Commission on Forensic Science (NCFS) and will increase the capacity of forensic science providers, improve the reliability of forensic analysis, and permit reporting of forensic results with greater specificity. The Task Force's Subcommittee on Forensics will spearhead the development of that strategic plan.

"The availability of prompt and accurate forensic science analysis to our law enforcement officers and prosecutors is critical to integrity in law enforcement, reducing violent crime and increasing public safety," said Attorney General Sessions. "As we decide how to move forward, we bear in mind that the Department is just one piece of the larger criminal justice system and that the vast majority of forensic science is practiced by state and local forensic laboratories and is used by state and local prosecutors. We applaud the professionalism of the National Commission on Forensic Science and look forward to building on the contributions it has made in this crucial field."

The following three actions were announced today:

1. In the coming weeks, the Department will appoint a Senior Forensic Advisor to interface with forensic science stakeholders and advise Department leadership;

Forensic Science Working Group



- **Department Working Group**
- **Chaired by Senior Advisor on Forensic Science**
- **Department Components Represented**
- **Meet Bi-Monthly**
- **Proactive & Reactive to Emerging Issues**

Council of Federal Forensic Laboratory Directors (CFFLD)



CFFLD

- **First established 2005**
- **Attorney General Alberto Gonzales**
- **Re-chartered 2018 by DAG Rosenstein**
- **Announced at AAFS Seattle (February 2018)**
- **First Meeting: May 21, Atlanta, Georgia at ASCLD**

Administration

- **Coordinated through the ODAG**
- **Chaired by a DOJ crime lab director**
- **Designated by the DAG**
- **Vice-Chair-non-DOJ voting member**

Mission

- **Advise federal agencies concerned with formulation & execution of national policies on forensic science**
- **Forum for consensus building and exchange of information regarding implementation of policies related to forensic science**

Scope

- **Advise represented federal agencies on issues related to the advancement of forensic science**
- **Through the DAG, the CFFLD may respond to requests for assistance or provide consensus-based position statements**
- **Provided to federal agencies of the judicial or legislative branches and to state and local jurisdictions**

Topics

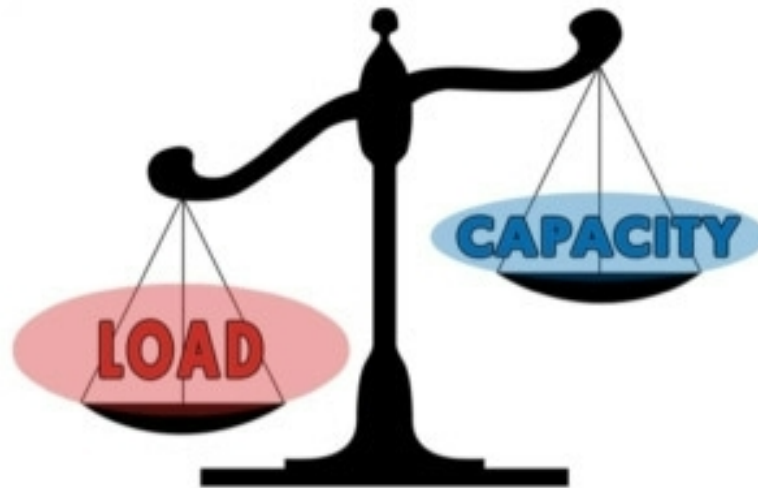
- **Forensic research**
- **Application of new/improved technologies or methods**
- **Quality assurance issues**
- **Education and training**
- **Provision of consensus-based position statements to the DAG**
- **Other represented federal agencies**

Mechanism for Ongoing Communication/Collaboration & Input

State, Local, Tribal Practitioners
(Pending-Stay Tuned)



II. Increasing the **Capacity** of Forensic Service Providers



Status & Needs Assessment Forensic Science Community

Justice for All Reauthorization Act 2016



S. 2577

One Hundred Fourteenth Congress
of the
United States of America

AT THE SECOND SESSION

Began and held at the City of Washington on Monday,
the fourth day of January, two thousand and sixteen

An Act

To protect crime victims' rights, to eliminate the substantial backlog of DNA and other forensic evidence samples to improve and expand the forensic science testing capacity of Federal, State, and local crime laboratories, to increase research and development of new testing technologies, to develop new training programs regarding the collection and use of forensic evidence, to provide post-conviction testing of DNA evidence to exonerate the innocent, to support accreditation efforts of forensic science laboratories and medical examiner offices, to address training and equipment needs, to improve the performance of counsel in State capital cases, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

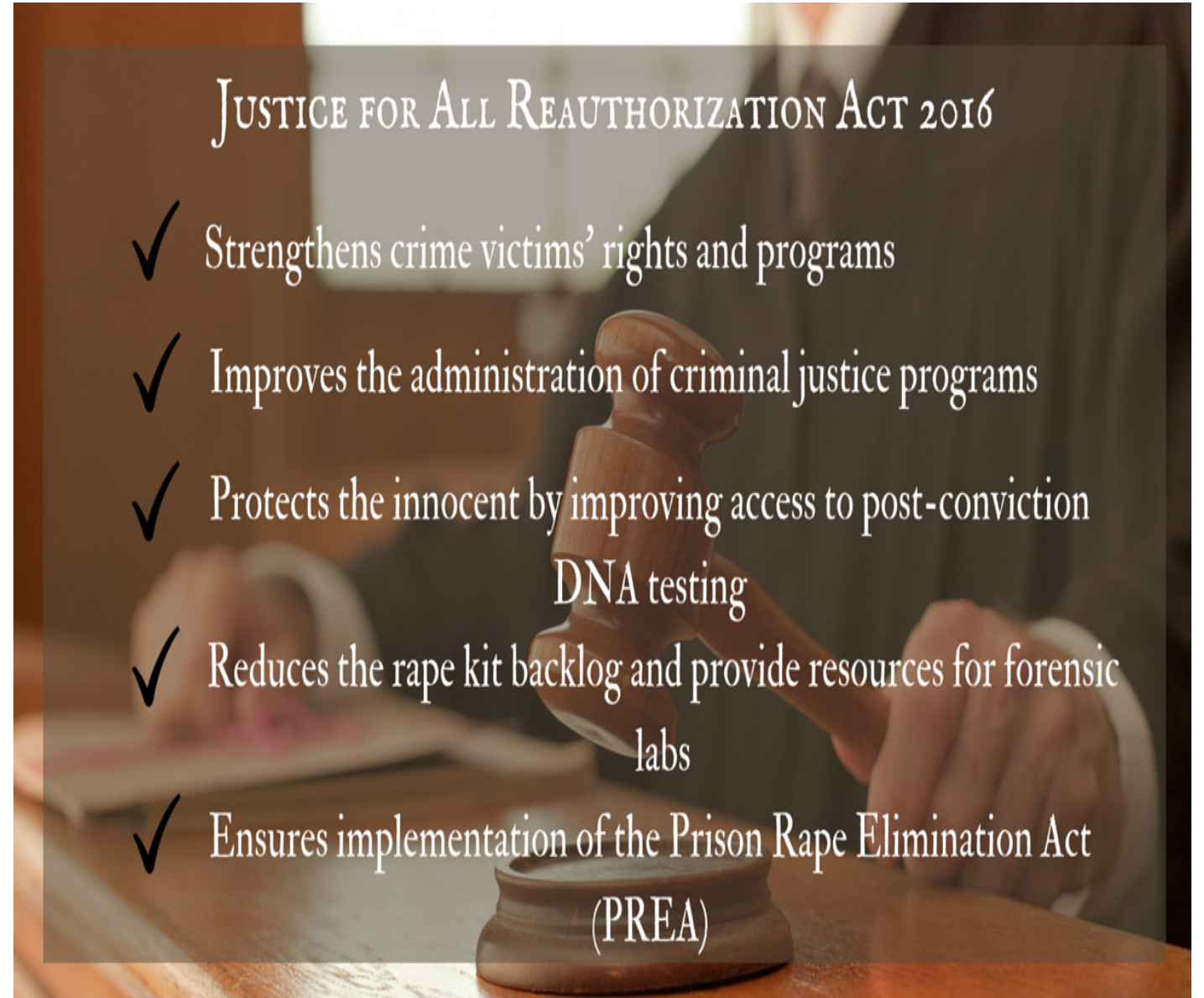
SECTION 1. SHORT TITLE.

This Act may be cited as the "Justice for All Reauthorization Act of 2016".

SEC. 2. CRIME VICTIMS' RIGHTS.

(a) **RESTITUTION DURING SUPERVISED RELEASE.**—Section 3583(d) of title 18, United States Code, is amended in the first sentence by inserting " , that the defendant make restitution in accordance with sections 3663 and 3663A, or any other statute authorizing a sentence of restitution, " after "supervision".

(b) **COLLECTION OF RESTITUTION FROM DEFENDANT'S ESTATE.**—Section 3613(b) of title 18, United States Code, is amended by adding at the end the following: "The liability to pay restitution shall terminate on the date that is the later of 20 years from the entry of judgment or 20 years after the release from imprisonment of the person ordered to pay restitution. In the event of the death of the person ordered to pay restitution, the individual's



JUSTICE FOR ALL REAUTHORIZATION ACT 2016

- ✓ Strengthens crime victims' rights and programs
- ✓ Improves the administration of criminal justice programs
- ✓ Protects the innocent by improving access to post-conviction DNA testing
- ✓ Reduces the rape kit backlog and provide resources for forensic labs
- ✓ Ensures implementation of the Prison Rape Elimination Act (PREA)

SEC. 16. NEEDS ASSESSMENT OF FORENSIC LABORATORIES

(a) **STUDY AND REPORT.**—Not later than October 1, 2018, the Attorney General shall **conduct a study** and **submit a report** to the Committee on the Judiciary of the Senate and the Committee on the Judiciary of the House of Representatives on the **status and needs of the forensic science community.**

(b) **REQUIREMENTS** —The report required under subsection (a) shall—

(1) examine the status of **current workload, backlog, personnel, equipment, and equipment needs of public crime laboratories and medical examiner and coroner offices;**

(2) include an overview of **academic forensic science resources and needs**, from a broad forensic science perspective, including **nontraditional** crime laboratory **disciplines** such as forensic anthropology, forensic entomology, and others as determined appropriate by the Attorney General;

(3) consider—

(A) the National Institute of Justice study, **Forensic Sciences: Review of Status and Needs**, published in 1999;

(B) the **Bureau of Justice Statistics census reports** on Publicly Funded Forensic Crime Laboratories, published in 2002, 2005, 2009, and 2014;

(C) the National Academy of Sciences report, **Strengthening Forensic Science: A Path Forward**, published in 2009; and

(D) the **Bureau of Justice Statistics survey** of forensic providers **recommended by the National Commission of Forensic Science** and approved by the Attorney General on September 8, 2014;

(4) provide Congress with a comprehensive view of the **infrastructure, equipment, and personnel needs** of the broad **forensic science community**; and

(5) be made **available to the public**.

Listening Sessions

- **Forensic Toxicology Community**
- **IAI**
- **MDI Community**
- **ASCLD**
- **SWGDE**
- **Attorneys/Judges**
- **IACP forensic leaders**
- **FEPAC**
- **Federal Lab Directors**

Rapid DNA Act 2017



CRJ

H. R. 510

One Hundred Fifteenth Congress of the United States of America

AT THE FIRST SESSION

*Began and held at the City of Washington on Tuesday,
the third day of January, two thousand and seventeen*

An Act

To establish a system for integration of Rapid DNA instruments for use by law enforcement to reduce violent crime and reduce the current DNA analysis backlog.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the "Rapid DNA Act of 2017".

SEC. 2. RAPID DNA INSTRUMENTS.

(a) STANDARDS.—Section 210303(a) of the DNA Identification Act of 1994 (42 U.S.C. 14131(a)) is amended by adding at the end the following:

"(5)(A) In addition to issuing standards as provided in paragraphs (1) through (4), the Director of the Federal Bureau of Investigation shall issue standards and procedures for the use of Rapid DNA instruments and resulting DNA analyses.

"(B) In this Act, the term 'Rapid DNA instruments' means instrumentation that carries out a fully automated process to derive a DNA analysis from a DNA sample."

(b) INDEX.—Paragraph (2) of section 210304(b) of the DNA Identification Act of 1994 (42 U.S.C. 14132(b)(2)) is amended to read as follows:

"(2) prepared by—

"(A) laboratories that—

"(i) have been accredited by a nonprofit professional association of persons actively involved in forensic science that is nationally recognized within the forensic science community; and



Statutory Quality Standards (Analysis & Data)

Indices “shall include only information on DNA Identification records and DNA analyses that are Based on analyses”

- Performed **by or on behalf of a criminal justice agency** (or Secretary of Defense)
- In accordance with **publically available standards**
- That **satisfy or exceed** the guidelines for a quality assurance program for DNA analysis [**DNA QAS**]
- Issued by the Director of the FBI

DNA Identification Act of 1994
42 USC 14132
(Now 34 USC 12592)





Authorized Analysis Entities

Criminal justice agencies

- **Using Rapid DNA instruments approved by the Director of the FBI**
- In **compliance** with the **standards and procedures** issued by the Director **[pending]**

34 USC 12592(2)(b)
Rapid DNA Act of 2017



One Hundred Fifteenth Congress
of the
United States of America

AT THE FIRST SESSION

Began and held at the City of Washington on Tuesday,
the third day of January, two thousand and seventeen

An Act

To establish a system for adoption of Rapid DNA instruments for use by law
enforcement to reduce violent crime and reduce the current DNA analysis backlog

As amended by the Senate and House of Representatives of
the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.
This Act may be cited as the "Rapid DNA Act of 2017".

SEC. 2. RAPID DNA INSTRUMENTS.

(a) STRONGARM.—Section 21090(a) of the DNA Identification
Act of 1994 (42 U.S.C. 14132(a)) is amended by adding at the
end the following:

"(5A) In addition to issuing standards as provided in
paragraphs (1) through (4), the Director of the Federal Bureau
of Investigation shall issue standards and procedures for the
use of Rapid DNA instruments and enabling DNA analysis.

"(B) In this Act, the term 'Rapid DNA instruments' means
instrumentation that carries out a fully automated process
to derive a DNA analysis from a DNA sample."

(b) INDEX.—Paragraph (2) of section 21090(b) of the DNA
Identification Act of 1994 (42 U.S.C. 14132(b)) is amended to
read as follows:

"(2) prepared by—

"(A) laboratories that—

"(i) have been accredited by a nonprofit profes-
sional association of persons actively involved in
forensic science that is nationally recognized within
the forensic science community; and

Rapid DNA Act of 2017 (September 1, 2017)

“In this Act, the term ‘Rapid DNA instruments’ means instrumentation that carries out a **fully automated process** [extraction, amplification, separation, detection, and **interpretation with no human intervention**] to derive a DNA analysis from a DNA sample.”

34 USC 12591 (a)(5)(B)



Statutory Quality Standards (Documentary Standards & Procedures)

“In addition to issuing standards as provided in paragraphs (1) through (4) [DNA QAS], **the Director of the Federal Bureau of Investigation shall issue standards and procedures for the use of Rapid DNA instruments and resulting DNA analyses.**”

34 USC 12591 1(A)(5)(A) Rapid DNA Act of 2017

H. R. 510

One Hundred Fifteenth Congress
of the
United States of America
AT THE FIRST SESSION
Begun and held at the City of Washington on Tuesday,
the third day of January, two thousand and seventeen.

An Act

To establish a system for integration of Rapid DNA instruments for use by law enforcement to reduce violent crime and reduce the current DNA analysis backlog.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the "Rapid DNA Act of 2017".

SEC. 2. RAPID DNA INSTRUMENTS.

(a) STRAIGHTEN—Section 21503(a) of the DNA Identification Act of 1994 (42 U.S.C. 14131(a)) is amended by adding at the end the following:

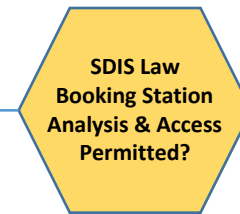
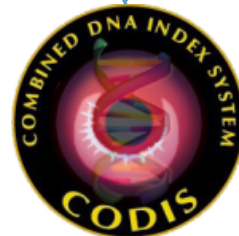
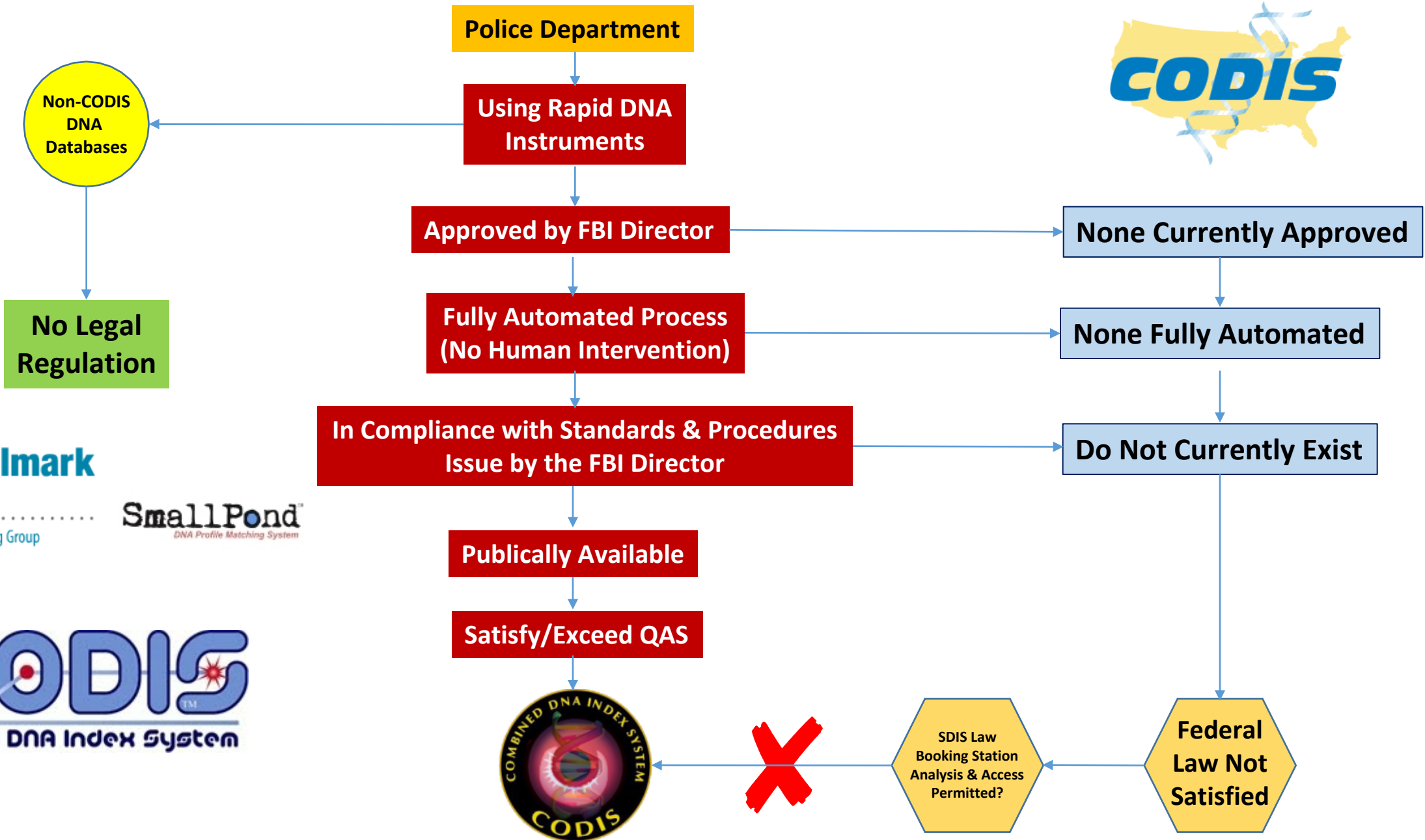
"(5)(A) In addition to issuing standards as provided in paragraphs (1) through (4), the Director of the Federal Bureau of Investigation shall issue standards and procedures for the use of Rapid DNA instruments and resulting DNA analyses.

"(B) In this Act, the term 'Rapid DNA instrument' means instrumentation that carries out a fully automated process to derive a DNA analysis from a DNA sample."

(b) INSERT—Paragraph (2) of section 21504(b) of the DNA Identification Act of 1994 (42 U.S.C. 14132(b)(2)) is amended to read as follows:

"(2) approved by—
"(A) laboratories that—
"(i) have been accredited by a nonprofit professional association of persons actively involved in forensic science that is nationally recognized within the forensic science community; and

Field Use of Rapid DNA: Statutory Pipeline to CODIS



FBI Rapid DNA Roadmap

2018 Enhanced CODIS Software

- RDIS – 4th Tier of CODIS
- CODIS Rapid Enrollment
- Search-DNA Index of Special Concern (SDIS & NDIS DISC & Subsequent Legacy Searches)



2018 Draft Pilot Plan and Schedule for 2019 Pilots

2018 Draft Authority to Operate Rapid DNA in Booking Stations

2018 Draft Rapid DNA Quality Assurance Standards for Booking Stations

2018 Draft Rapid DNA Procedures for Booking Stations

2019 Rapid Booking Station Pilots (AZ, CA, FL, LA, TX)

IN THE SUPREME COURT OF CALIFORNIA

| | | |
|---------------------------|---|---------------------------|
| THE PEOPLE, |) | |
| |) | |
| Plaintiff and Respondent, |) | |
| |) | S223698 |
| v. |) | |
| |) | Ct.App. 1/2 A125542 |
| MARK BUZA, |) | |
| |) | San Francisco County |
| Defendant and Appellant. |) | Super. Ct. No. SCN 207818 |
| _____ |) | |

In 2004, California voters passed Proposition 69 (Prop. 69, as approved by voters, Gen. Elec. (Nov. 2, 2004); known as the “DNA Fingerprint, Unsolved Crime and Innocence Protection Act” (DNA Act)) to expand existing requirements for the collection of DNA identification information for law enforcement purposes. The DNA Act requires law enforcement officials to collect DNA

- **Decided Monday**
- **Arrestee DNA Collection**
- **Cal. Prop. 69 (2004)**
- **State Constitution Not Violated**
- **Federal Constitution Not Violated**
- **Reversed 2014 Cal Ct. App. Decision**
- **Held Cal. Const. Art 1 Sec 13 Violated**

III. Increasing the **Validity & Reliability** of Forensic Evidence

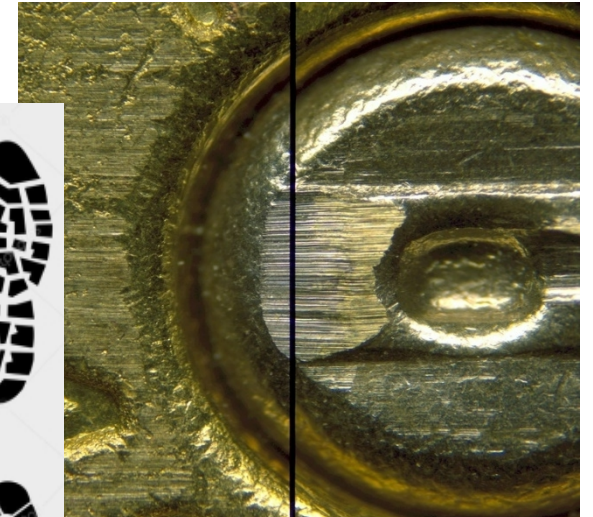


FBI Decision Threshold Studies



Decision Threshold Studies (Black Box)

- Firearms/Toolmarks
- Shoe Print
- Document Examination



DA PRESCRIBED TO ONE OF MY
ME; I WAS TOLD THIS WAS A POSSIBLE
ABOUT THIS, I TOLD THE AGENT
OR GOT THE PRESCRIPTION FOR
IN HIS NAME, TO PROTECT MY
THE POTENTIAL EMBARRASSING

Study Attributes

- **Discipline-Wide (Fed, State, Local, Private)**
- **Large-Scale >100s Examiners; 1,000s Samples; >10,000 Individual Decisions**
- **Fully Open Set Design**
- **Biased Hard**
- **Multi-Year**

Uniform Language Testimony and Reports



(ULTRs)



A Quality Assurance Measure to Correctly Convey Significance and Limitations of Expert Conclusions in Understandable Language

- Scientifically/Technically Justified**
- Epistemically Bounded**
- Probative Value Correctly Formulated & Expressed**
- Comprehensible Translation to Finder of Fact**

Purpose

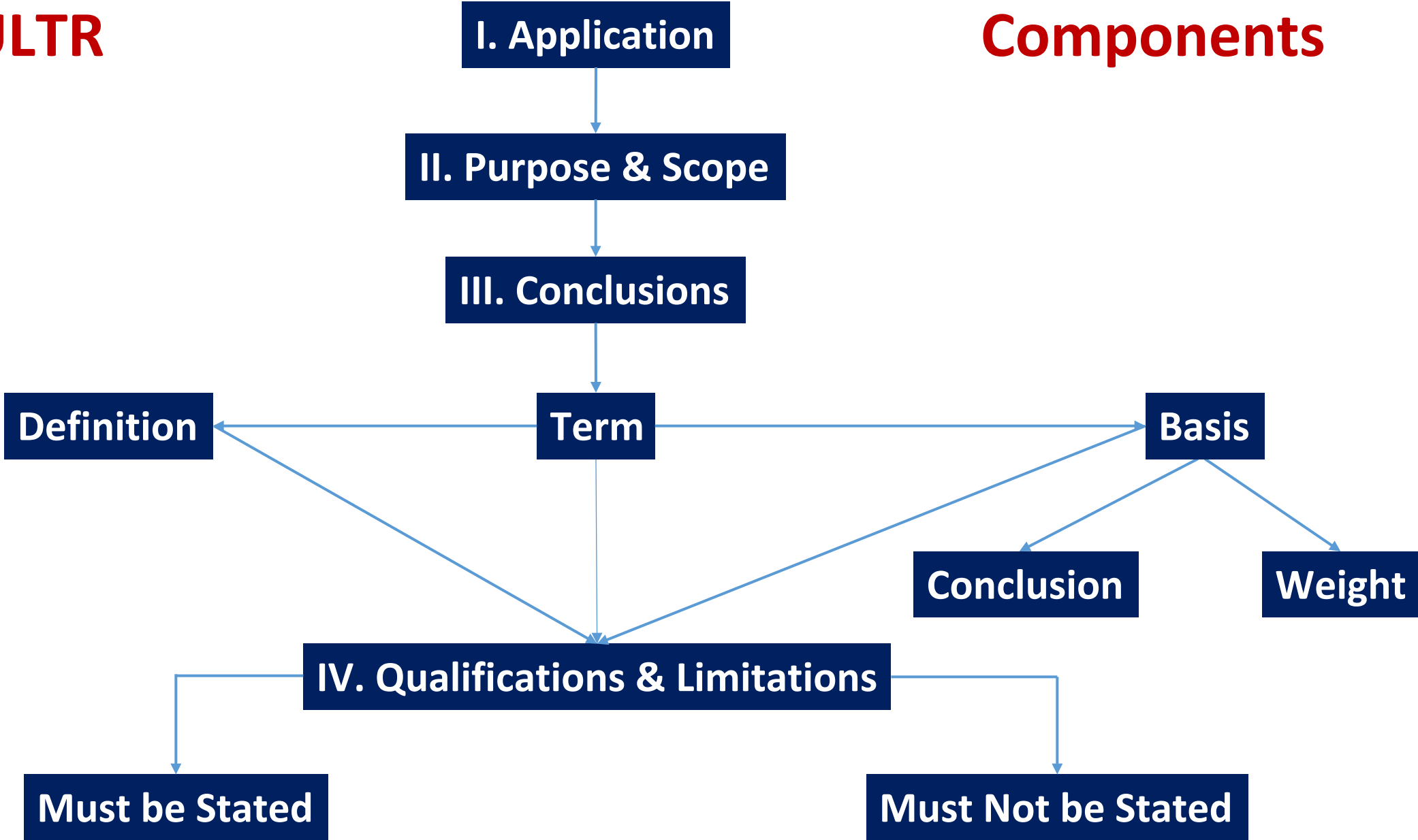
- **Uniformity of Language in Testimony & Reports**
- **Consistency Among Department Forensic Examiners**
- **Consistency Between Forensic Examiners in Same Lab**

Consistency Between Same Examiner/Different Testimonies

- **Enhanced Quality of Testimony & Reports**

ULTR

Components



Latent Print ULTR

- **Approved**

- **Announced at AAFS by DAG Rosenstein**

- **Online at:**

<https://www.justice.gov/file/1036801/download>





- Conclusions are Examiner **Decision-Based**
- Evidence in Support of **Alternative Propositions Evaluated**
- Source Identification = Statement of **Examiner's Belief** (Not Statistically-Derived or Verified Measurement or Comparison)
- Basis of Source Identification = Logical, **Evidence-Based Inductive Inference**

Qualifications/Limitations

- **Individualize/Individualization**
- **100% Level of Certainty**
- **Infallible/Zero Error Rate**
- **Number of LP Exams Not Proxy for Accuracy of Instant Conclusion**
- **Reasonable Degree of Scientific Certainty Not Stated**

Testimony Monitoring Framework



Testimony Monitoring

- **Quality Assurance Measure**
- **Department Laboratories**
- **Department Digital Analysis Entities**

Testimony Monitoring

- **Testimonial Statements & Conclusions**
- **Properly Qualified & Appropriately Communicated**
- **Ongoing Assessment of Testimonial Presentations**
- **Highlight Opportunities for Continual Improvement**

Evaluation

- **Consistency with mandatory component policies & procedures regarding analysis of forensic evidence**
- **Opinions, conclusions, and statements regarding case-specific facts & data were properly qualified and did not exceed scientific limitations of the method performed or discipline in question**
- **Conclusions were in conformity with any applicable ULTR**

Posting DOJ Laboratory Documents Online



Online Posting

- **Quality Management System Documents**
- **Testing/Analysis/Examination Policies/SOPs**
- **Validation Study Summaries**

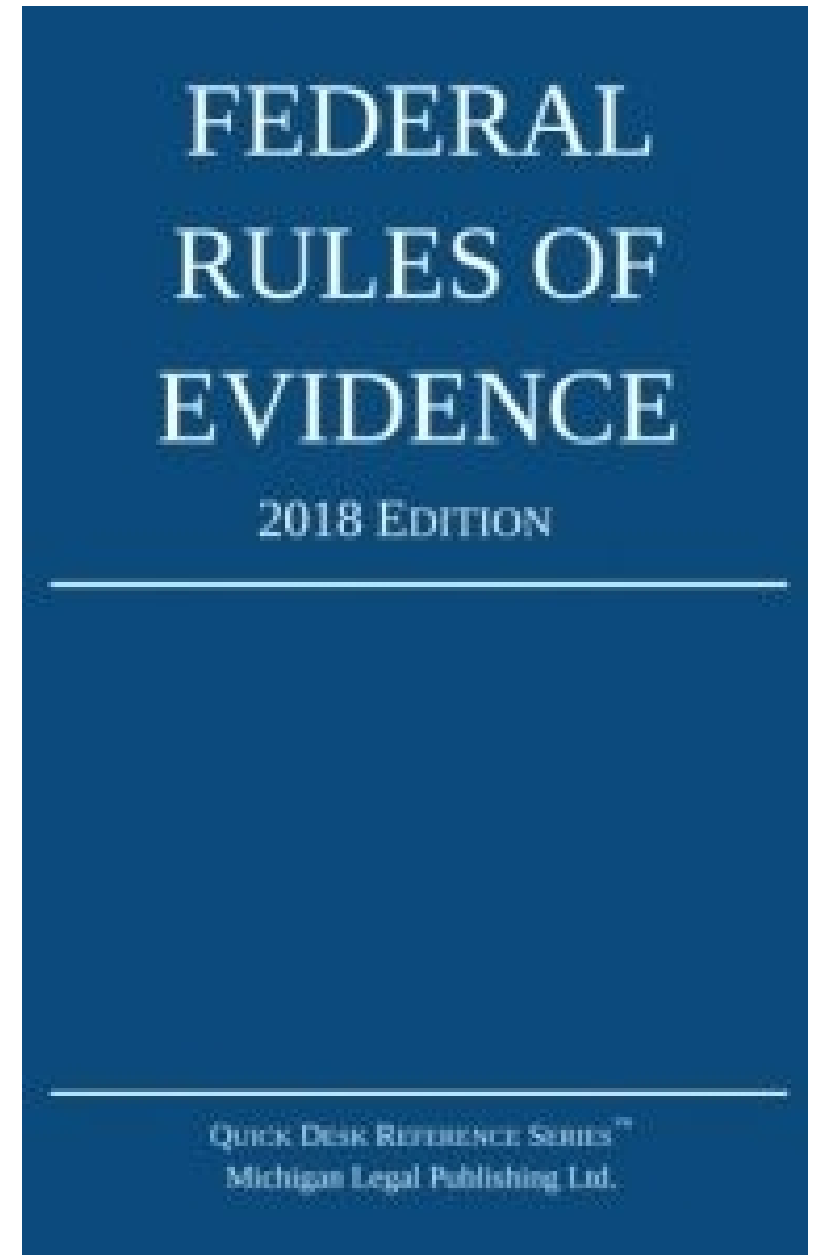
Online Posting

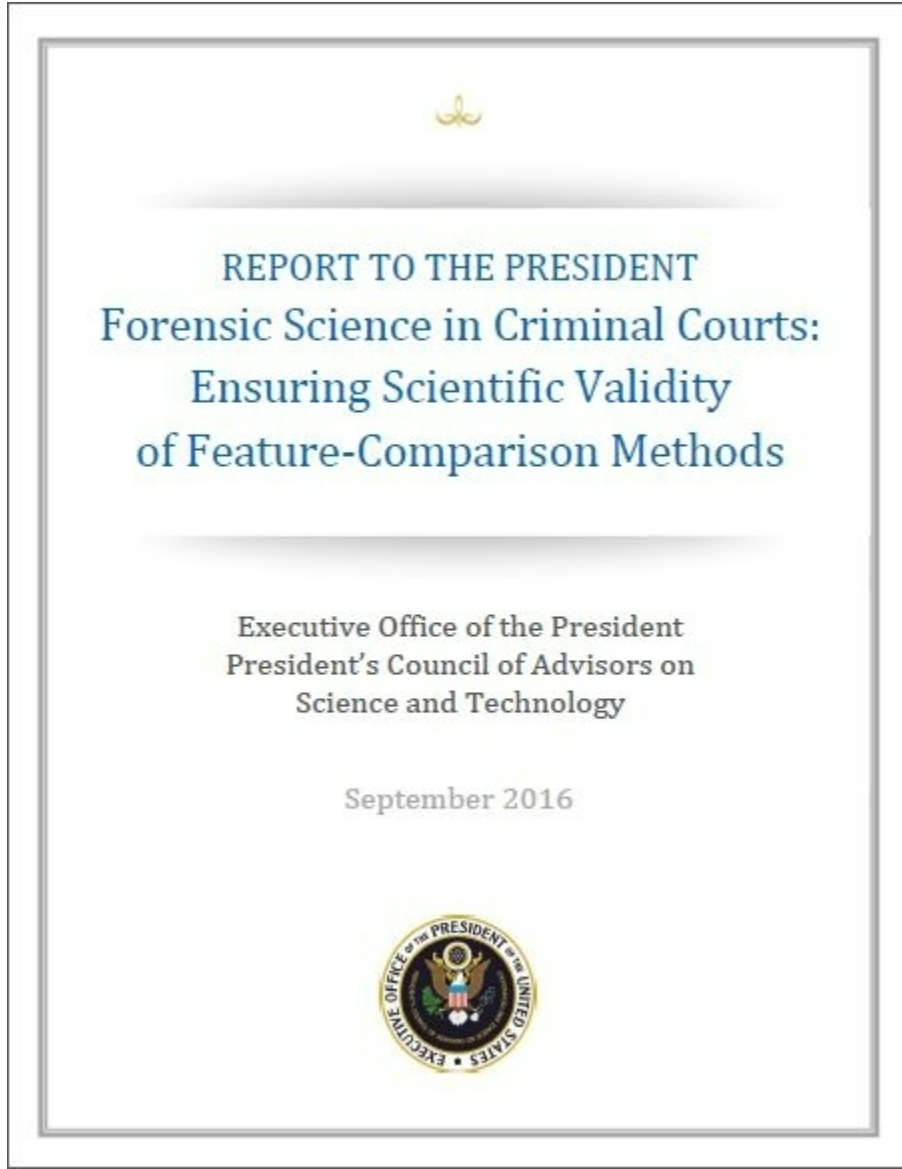
- **Each DOJ Laboratory Component**
- **Current Version of Documents**
- **Spring 2018**

Principles & Utilities

- **Transparency** (Scientific Values)
- **Discovery & Disclosure Efficiencies** (Legal Compliance)
- **Sharing of High Quality SOPs** (Quality Promotion)

**The PCAST Report
&
The Attempt to
Amend
FRE Rule 702
(Expert Testimony)**





- DNA Mixtures (Single Source + 2 Contributors)
- DNA Mixtures (Complex-More Than 2 Contributors)
- Bitemark Analysis
- Latent Fingerprint Analysis
- Firearms Analysis
- Footwear Analysis
- Hair Analysis (Partial Consideration)



Contents lists available at ScienceDirect

Forensic Science International: Genetics

journal homepage: www.elsevier.com/locate/fsig



Research paper

Internal validation of STRmix™ for the interpretation of single source and mixed DNA profiles



Tamara R. Moretti^{a,*}, Rebecca S. Just^a, Susannah C. Kehl^b, Leah E. Willis^a, John S. Buckleton^{c,d}, Jo-Anne Bright^c, Duncan A. Taylor^{c,f}, Anthony J. Onorato^a

^a DNA Support Unit, Federal Bureau of Investigation Laboratory, 2501 Investigation Parkway, Quantico, VA 22135, USA

^b Biometrics Analysis Section, Federal Bureau of Investigation Laboratory, 2501 Investigation Parkway, Quantico, VA 22135, USA

^c Institute of Environmental Science and Research, Private Bag 92021, Auckland 1025, New Zealand

^d National Institute of Standards and Technology, 100 Bureau Drive, Gaithersburg, MD 20899, USA

^e Forensic Science South Australia, 21 Divett Place, Adelaide, SA 5000, Australia

^f School of Biological Sciences, Flinders University, GPO Box 2100 Adelaide, SA, 5001 Australia

- **FBI STRMix Internal Validation**
- **Online April 5, 2017**
- **300+ Profiles**
- **Single Source-5 Mixed Profiles**
- **Wide Range-Ratios/Templates**

- **800 Known-Contributor Propositions**
- **100 Reference Comparisons to Mixed Forensic Samples**
- **60k Tests-93.4% True Contributors/LR Supported Inclusion**
- **60k Tests-99% Non-Contributors/LRs Supported Exclusion**
- **Fit for Purpose-Interpretation/Stat. Assessment SS-5 Contributors**



Research paper

Internal validation of STRmix™ – A multi laboratory response to PCAST

Jo-Anne Bright^{a,*}, Rebecca Richards^a, Maarten Kruijver^a, Hannah Kelly^a, Catherine McGovern^a, Alan Magee^b, Andrew McWhorter^c, Anne Ciecko^d, Brian Peck^e, Chase Baumgartner^f, Christina Buettner^g, Scott McWilliams^g, Claire McKenna^h, Colin Gallacherⁱ, Ben Mallinderⁱ, Darren Wright^j, Deven Johnson^k, Dorothy Catella^l, Eugene Lien^m, Craig O'Connor^m, George Duncanⁿ, Jason Bundy^o, Jillian Echard^p, John Lowe^q, Joshua Stewart^r, Kathleen Corrado^s, Sheila Gentile^s, Marla Kaplan^t, Michelle Hassler^u, Naomi McDonald^v, Paul Hulme^w, Rachel H. Oefelein^x, Shawn Montpetit^y, Melissa Strong^y, Sarah Noël^z, Simon Malsom^A, Steven Myers^B, Susan Welti^C, Tamyra Moretti^D, Teresa McMahon^E, Thomas Grill^F, Tim Kalafut^G, MaryMargaret Greer-Ritzheimer^H, Vickie Beamer^I, Duncan A. Taylor^{J,K}, John S. Buckleton^{a,L}

^a Institute of Environmental Science and Research Limited, Private Bag 92021, Auckland, 1142, New Zealand

^b Forensic Science Ireland, Ireland

^c Texas Department of Public Safety, Houston Laboratory, United States

^d Midwest Regional Forensic Laboratory, Andover, MN, United States

- **Collection of Previously Unpublished Validation Data**
- **Wide Range Kits, Equipment, Proportions, Templates**
- **Established Validity of STRMix Interpret/Statistically Assess Mixtures Well Beyond PCAST 3-Mix/20% POI Limitation**

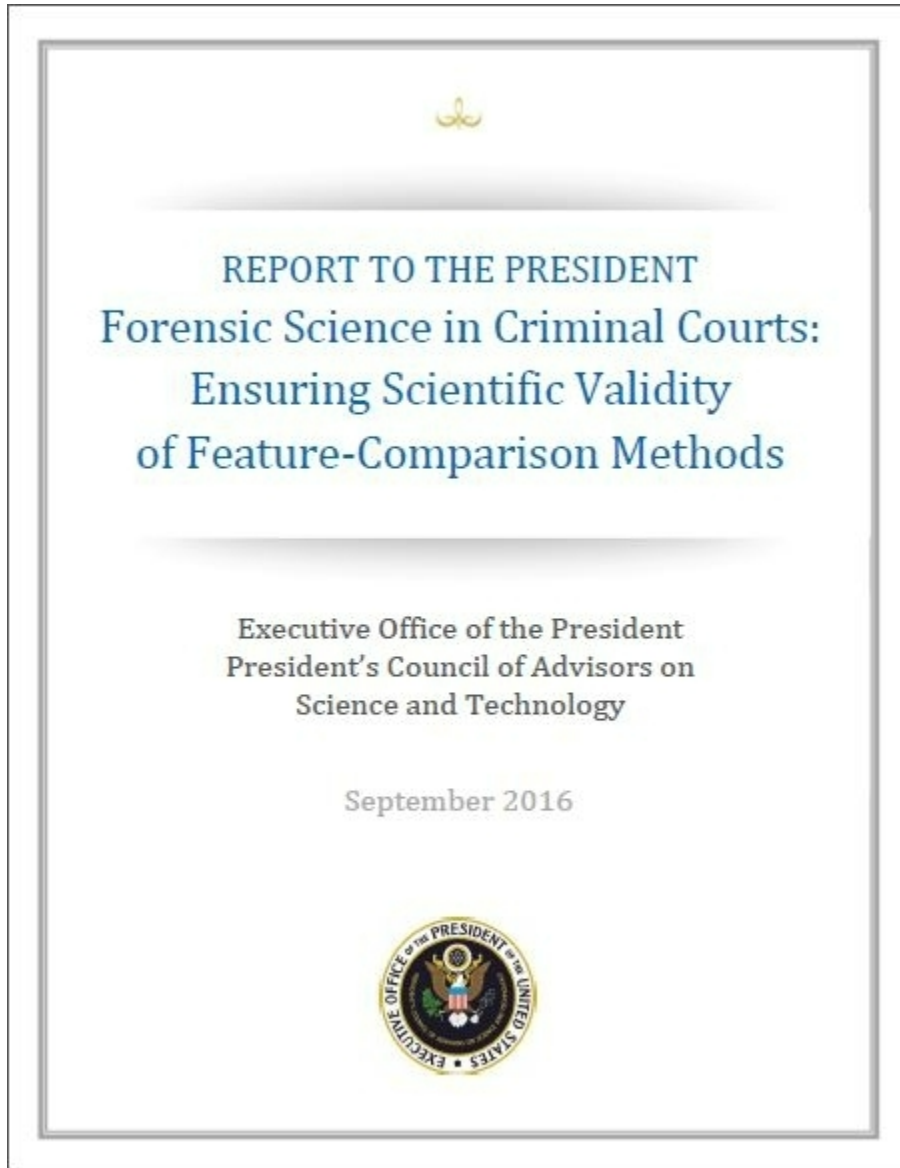
- **Online 1-8-18**
- **31 Laboratories**
- **2,825 Mixtures**
- **3-6 Person Mixtures**


Black Box Studies

“[T]he foundational validity of a subjective method can only be established through multiple, appropriately designed black-box studies.” (p. 9).

Error rates

- Black box study validation is required if method is “subjective” (p. 46, 143).
- False + rate must be based solely on # of conclusive determinations rather than proportion of all examinations (p. 51-52).
 - Only the % of FP’s that occupy upper bound of 95% CI should be reported. To even report an accurate lower bound would be an attempt at “obfuscation.” (p. 153).
- Examiners who took no part in these studies should testify that the black box FP error rate is applicable to the case at hand (p. 56, 66, 112, 147, 150)





REPORT TO THE PRESIDENT
Forensic Science in Criminal Courts:
Ensuring Scientific Validity
of Feature-Comparison Methods

Executive Office of the President
President's Council of Advisors on
Science and Technology

September 2016



PCAST recommends that the Judicial Conference of the United States, through its Subcommittee on the Federal Rules of Evidence, develop **best practices manuals** and an **Advisory Committee note** and the Federal Judicial Center develop **educational programs** related to procedures for evaluating the scientific validity of forensic feature-comparison methods. (p. 145).



BOSTON COLLEGE | LAW

October 27, 2017

Boston College School of Law

Judicial Conference Advisory Committee on Federal Rules



BOSTON COLLEGE | LAW

Amend FRE 702 for Forensic Identification?
Create a New Rule for Forensic Identification?
Draft a Best Practices Manual for Judges on Forensic Identification?

PANELISTS

Dr. Thomas Albright
Prof. Ronald J. Allen
Susan Ballou
Dr. Itiel Dror
Chris Fabricant, Esq.
Anne Goldbach, Esq.
Andrew Goldsmith, Esq.
Hon. Paul W. Grimm
Zachary Hafer, Esq.
Ted R. Hunt, Esq.
Dr. Alice Isenberg
Dr. Karen Kafadar
Prof. David H. Kaye
Prof. Jonathan J. Koehler
Hon. Alex Kozinski

MODERATOR

Professor Daniel J. Capra

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Dr. Eric Lander
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Prof. Jane Campbell Moriarty
Prof. Erin Murphy
Hon. Jed S. Rakoff
Prof. Stephen A. Saltzburg
Dr. Jeff Salyards
Hon. Patti B. Saris
Laura M. Shamp, Esq.
Thomas M. Sobol, Esq.



Forensic Expert Testimony, Daubert, and Rule 702

March 2018 | Vol. 86, No. 4

Fixing Rule 702: The PCAST Report and Steps to Ensure the Reliability of Forensic Feature-Comparison Methods in the Criminal Courts

By Eric S. Lander

Online



Scientific Validity and Error Rates: A Short Response to the PCAST Report

By Ted Robert Hunt

DOJ Senior Advisor on Forensic Science

Scientific Excellence in the Forensic Science Community

By Alice R. Isenberg & Cary T. Oien

DAD FBI Crime Laboratory

The Reliability of the Adversarial System to Assess the Scientific Validity of Forensic Evidence

By Andrew D. Goldsmith

Associate Deputy Attorney General

Federal Rules Advisory Committee Meeting
Thurgood Marshall
Federal Judiciary Building
Washington, D.C.
April 26, 2018



Questions?

RE: DRAFT Remarks

From: "Crowell, James (ODAG)" <(b) (6)>
To: "Hunt, Ted (ODAG)" <(b) (6)>
Cc: "Hur, Robert (ODAG)" <(b) (6)>
Date: Mon, 18 Sep 2017 14:24:19 -0400

Good by me

From: Hunt, Ted (ODAG)
Sent: Friday, September 15, 2017 11:23 AM
To: Crowell, James (ODAG) <(b) (6)>; Hur, Robert (ODAG) <(b) (6)>
Subject: DRAFT Remarks

Jim/Rob:

Attached above are draft remarks that I've prepared for a talk I'm giving next week (Wednesday) to the Kansas Bureau of Investigation and the Kansas Attorney General's Office at the KBI's new lab in Topeka, KS.

These remarks have already been reviewed by OLP. Note that they contain a couple references to the PCAST Report, and that these are ODAG's first public comments on that Report.

Please let me know if you have any questions or comments.

Thanks,

Ted

Ted R. Hunt
Senior Advisor to the Attorney General on Forensic Science
Office of the Deputy Attorney General
United States Department of Justice
950 Pennsylvania Ave, NW
C. 20530

(b) (6)

DAG Meeting-Feb 12 9:10 a.m.

From: "Hunt, Ted (ODAG)" <(b) (6)>
To: "Murphy, Marcia (ODAG)" <(b) (6)>
Date: Fri, 09 Feb 2018 13:30:34 -0500
Attachment Briefing Document for Forensic Bitemark Discussion doc (24.5 kB)

Marcy,

Attached is a short briefing document for the DAG's review in preparation for our 9:10 a.m. meeting on Monday.

Thanks,

Ted

Ted R. Hunt
Senior Advisor to the Attorney General on Forensic Science
Office of the Deputy Attorney General
United States Department of Justice
950 Pennsylvania Ave. NW
Washington, DC 20530

(b) (6)
(U) (U)

Re: Comment for story about forensic science for The Nation

From: Tim Requarth <(b) (6)>
To: "Hunt, Ted (ODAG)" <(b) (6)>
Date: Tue, 14 Nov 2017 09:27:34 -0500

Thanks, Ted. I look forward to hearing from OPA.

On Mon, Nov 13, 2017 at 3:40 PM, Hunt, Ted (ODAG) <(b) (6)> wrote:

Hi Tim,

Thanks for your message. I've reached out to DOJ OPA, per Department policy, before responding to your request. Will be back in touch with you soon.

Thanks,

Ted

From: Tim Requarth <(b) (6)>
Sent: Friday, November 10, 2017 9:29 AM
To: Hunt, Ted (ODAG) <(b) (6)>
Subject: Comment for story about forensic science for The Nation

Duplicative Material see bates stamp 20220314-09790