

Written Testimony of

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Submitted to the

Senate Committee on the Judiciary
United States Senate

Regarding the Hearing on

“Strengthening Forensic Science in the United States”

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My name is Matthew F. Redle. I am the duly elected County and Prosecuting Attorney of Sheridan County, Wyoming. I am also Wyoming's State Director to the National District Attorneys Association (NDAA). NDAA represents state and local prosecutors across the country. It is in my capacity as a member of the Board of Directors of the National District Attorneys Association that I appear before the Committee today.

The quality and reliability of forensic evidence is a matter of great interest to prosecutors throughout the country. As prosecutors we are obligated to act as "ministers of justice." We are charged with doing the right thing and doing so in the right way in our pursuit of justice. In many instances we are the end consumer of forensic science services. The evidence generated by this nation's crime laboratories often provide information critical to our prosecutorial decision making, from charging through consideration of post conviction matters. Often such evidence serves as a critical link in a chain of proof leading to conviction. Frequently that evidence is offered in the most serious of cases. The reliability and integrity of that evidence is vital if we are to effectively execute our duty to seek justice.

When a crime is committed within our communities it is not enough that someone is arrested. The person arrested must be the right someone. Our victims do not ask that someone, anyone pay for the crime committed against them. They ask that the right someone, the person responsible be brought to justice. Like our colleagues in law enforcement, we know that the arrest of the wrong person allows the true perpetrator to continue to victimize others. The excellent work of our nation's forensic scientists is critical to ensuring we get the criminal off the street and the victims can be assured that justice has been rightly served. All prosecutors want the best forensic science analysis available. The better the information available the greater the likelihood that our judgment will be better informed. We recognize that the best system of justice is one that exonerates the innocent before trial. Our interest, therefore, is keen.

The publication of the National Research Council report: *Strengthening Forensic Science in the United States: A Path Forward* has provided an agenda for a healthy discussion about the future of forensic science in this country. Though "the devil is always in the details," many of the recommendations found in the report have merit. We believe that many of these recommendations can effectively be implemented within a framework that already exists between the Department of Justice, existing accrediting agencies, and to a lesser degree NIST. One of the more important areas addressed in the report is the clear need for increased funding for our nation's forensics laboratories. Too often, justice is delayed because the forensics community lacks the resources

to effectively and efficiently process the evidence submitted to them. Focus on increased non-DNA related forensics funding will have the best and most immediate impact on our justice system of the many recommendations of the report. The unfortunate truth is that well educated and extremely skilled forensic scientists still require proper equipment and facilities to conduct their work efficiently and effectively. If the report does nothing but shed light on the tremendous resource needs of the community, it will have accomplished a noble goal.

In addition, we support laboratory accreditation of all forensic laboratories as a means of insuring reliable testing and analysis as recommended in the National Research Council report. By anyone's measure, the effort to encourage laboratory accreditation has already proven to be a success. The first laboratory accreditation began in 1982 as a voluntary program conducted under the auspices of American Society of Crime Laboratory Directors (ASCLD).¹ Subsequently ASCLD created a separate accreditation group to conduct such laboratory accreditations. That group, the American Society of Crime Laboratory Directors/Laboratory Accreditation Board (ASCLD/LAB) conducts accreditation evaluations of laboratories. Those laboratories have been inspected and found to meet national standards designed to ensure that evidence is properly examined and reported. Once a laboratory is accredited it is subject to a regimen of periodic performance audits and other evaluation measures.

At the start of 1998, 56% of DNA labs were accredited and 18% had applied.² "As of January 1, 2001, 63% of laboratories were accredited by an official organization, and 19% had applied for accreditation or had a pre-accreditation inspection by an accredited laboratory."³ In May of 2004, ASCLD/LAB reported it had accredited 256 laboratories. As of April 1, 2009, ASCLD/LAB reports that it had accredited 359 crime laboratories, including 181 state laboratories, 117 local laboratories, 22 federal laboratories, 12 international laboratories and 27 private laboratories.⁴ It is our understanding that this number represents 90% of public crime laboratories in this country. We support efforts to implement the form of accreditation recommended by the report and note that the process to convert to that accreditation standard is already ongoing. We do not see the need for additional and potentially overbearing and harmful bureaucracy to accomplish the goals laid out in the report surrounding accreditation.

¹ Peterson and Leggett, "*The Evolution of Forensic Science: Progress Amid the Pitfalls*," 36 Stetson L. Review 621, 632 (2007).

² Bureau of Justice Statistics Bulletin, *Survey of DNA Crime Laboratories, 1998*, 3 (USDOJ February 2000).

³ Bureau of Justice Statistics Bulletin, *Survey of DNA Crime Laboratories, 2001*, 3 (USDOJ January 2002).

⁴ See <http://www.ascl-d-lab.org/legacy/asclablegacylaboratories.html>.

Likewise, we support certification of laboratory scientists and analysts as a further method of insuring reliability and quality of forensic evidence. We are mindful that quality control standards are integral to trustworthy testing results. In large part, the accreditation process currently underway through existing accrediting bodies places a large amount of focus on quality assurance and quality control standards. However, that does not mean we can't do more. Such procedures are perhaps the greatest protection against human error, forensic fraud or examiner bias. In the same vein, quality forensic science service should be made available to defense counsel. In an adversarial system, the critical scrutiny of an opposing party is an essential component to quality assurance and quality control. As in accreditation, certification is a critical step, but one that must be conducted with great thought and consideration to the potential impacts the process could have on particular segments of the community, including but not limited to small and rural forensic service providers. Efforts to streamline this process will be critical.

As prosecutors we support a peer reviewed research agenda that examines the validity of assumptions underlying forensic disciplines where necessary. We support a research agenda that will improve whenever possible both the quality of scientific analysis and the capacity of our labs to meet the demand for reliable scientific evidence. Likewise we endorse research into sources of human error in forensic analysis including contextual bias and countermeasures to avoiding such errors in the future. We do not believe our support of research in anyway invalidates current best practices merely because we believe research will benefit the community.

While we support efforts in all of these areas, we do not endorse or support many of the claims and concerns that the NAS uses as a basis for the need for better forensic sciences. I do not believe you will find anyone here today that does not believe the forensic sciences have room for improvement. No discipline is infallible; however the media and opponents of the current system have gone so far as to indicate the system is "broken" and that anyone involved is biased and conducting or using bad science in bad faith. NDAA strongly disputes this claim. While we agree that steps can and should be taken to make the system better, we will not support efforts to label our justice system as broken or proposals that will serve to delay justice under false pretenses of fixing an allegedly broken system.

As mentioned above, NDAA supports in principle many of the recommendations in the report of the National Research Council. However, we have serious reservations concerning the recommendations

directed at the creation of a new federal agency, referred to in the report as the National Institute of Forensic Science (or NIFS) and recommendation # 4, to the extent that recommendation #4 would require public crime laboratories to be divorced from law enforcement or public safety agencies. It is to this recommendation that I will focus the balance of my attention.

As I begin this discussion, let me first say that the issues that were a basis for many of the concerns in the report are an infinitesimal exception to the rule that forensic scientists are qualified, unbiased individuals committed to science, facts and the truth. We believe that many of the criteria we lay out below the forensic science community also supports and is working to put in place as we speak. It is our belief that in terms of the integrity and reliability of forensic evidence it is more important how a laboratory is run rather than where it is located. As I mentioned earlier, we believe that the keys to creating a scientifically reliable crime laboratory lie in adherence to scientifically validated protocols that encompass recognized best practices. It is important that laboratories integrate rigorous quality assurance and quality control measures into the laboratory operation. Such qualities include, but are not limited to, the laboratory accreditation and personnel certification programs mentioned before; internal peer review procedures; maintenance of appropriate testing documentation to facilitate internal and external peer review of individual case testing; external and internal performance audits; regular proficiency testing as a check on both personnel and protocol performance; and corrective action procedures when proficiency testing or casework errors are discovered.

It also seems almost self evident that the culture within the laboratory is important to its performance in this regard. The values within the lab should promote the integrity of the testing process as a means of ascertaining the truth. That culture should promote the autonomy of the laboratory. Those values should necessarily be respected within the larger agency. Laboratory management and personnel can, and should, be free of undue internal or external pressures that would otherwise adversely impact the objective performance of their work.

The final step toward a laboratory that produces reliable quality testing and analysis is the provision of sufficient resources to meet the mission of the laboratory. This seems to be one of the lessons of some of the laboratory scandals of the recent past. If laboratories are not provided sufficient resources to meet the demands for service that confront them, some personnel within a laboratory may resort to

reprehensible “shortcuts” such as “dry-labbing”⁵ in which reports are written and results given without testing having been conducted.⁶ Again, we believe this to be the exception rather than the rule, but we also believe resources are the key.

We do not believe removing laboratories from law enforcement or prosecution sponsorship is warranted. First, the cost of removing and relocating crime laboratories would be enormous. Approximately 80% of public crime laboratories are housed within law enforcement agencies.⁷ Further, the cost of removing laboratories from sponsoring law enforcement agencies would necessarily include finding new, suitable accommodations. Undoubtedly those accommodations would require retrofitting of various features to meet safety and certain ventilation requirements at not inconsiderable cost.

Second, removal of laboratories from law enforcement sponsorship does not in anyway guarantee a reduction in examiner error, forensic fraud or contextual bias beyond what might be achieved with a rigorous quality control program. Public laboratories have experienced instances of “forensic fraud” but such misconduct is not solely the province of the public laboratory. The names of the “mountebanks”⁸ within public laboratories who violated their ethical obligations are well known in the field: Fred Zain, Joyce Gilchrist, and in my part of the country, Arnold Melnikoff. It is worth noting that these three frequent examples were able to avoid detection for as long as they did, at least in part due to a failure to adhere to proper quality control checks. Notably there was apparently little in the way of internal peer review procedures; there was a failure to maintain or require appropriate testing documentation; and there was an apparent lack of external and internal performance audits.⁹ In the case of Mr. Zain, there was apparently ample evidence warranting some question of his proficiency in conducting examinations, but no apparent corrective action was ever taken.

However such failures or frauds are found independently of police laboratories. One of our panelists, Professor Paul Giannelli has twice written articles with recommendations regarding the regulation and

⁵ This appears to have been a factor in the recent scandals involving the Houston Police Department laboratory. See also: Peterson and Leggett, “*The Evolution of Forensic Science: Progress Amid the Pitfalls*,” 36 Stetson L. Review 621, 634 (2007).

⁶ *Id.*, at pp. 651-53.

⁷ Peterson and Leggett, “*The Evolution of Forensic Science: Progress Amid the Pitfalls*,” 36 Stetson L. Review 621, 629 (2007).

⁸ The phrase was apparently first used by Professor James Starrs, *Mountebanks Among Forensic Scientists*, Forensic Science Handbook, vol. 2 (Richard Saferstein ed., Prentice Hall 1988).

⁹ See: Giannelli, *Wrongful Convictions and Forensic Science: The Need to Regulate Crime Labs*, 86 North Carolina Law Review 163 (2007). Cooley and Oberfield, *Increasing Forensic Evidence’s Reliability and Minimizing Wrongful Convictions: Applying Daubert Isn’t the Only Problem*, 43 Tulsa L. Rev. 285 (2007).

independence of forensic laboratories. In his first article,¹⁰ Professor Giannelli offered examples of several infamous instances of forensic fraud, which included Zain. Several examples involved misconduct on the part of employees in public laboratories, either in this country or in the United Kingdom. However, three of the individuals cited in Professor Giannelli's article enjoyed the independence suggested by the report recommendation.

Dr. Ralph Erdman¹¹ was a Texas pathologist who served as a contract medical examiner in more than forty Texas counties. In 1992 Dr. Erdman was convicted of 7 felonies for falsifying autopsy results. The evidence suggested as many as 100 faked autopsies. In many Texas cities the autopsies are performed by medical examiners or coroners who are full-time government employees, but jurisdictions in rural areas contract with pathologists for such services. Lubbock County paid Dr. Erdmann more than \$140,000 a year under such a contract, and he collected as much as \$600 per autopsy elsewhere. Dr. Erdman's fraud came to light when an autopsy report listed the weight of a decedent's spleen. Relatives of the deceased subsequently reported that the spleen had been removed several years earlier.¹²

Dr. Michael West,¹³ a dentist, did not limit his testimony to bite marks but rather offered opinions with respect to tool marks, shoeprints, fingernail and knife wound comparisons. West claimed to have invented a system he called "The West Phenomenon" in which he donned yellow goggles and with the aid of a blue laser, claimed he could identify bite marks, scratches, and other marks on a corpse that no one else, including other experts, could see. West said his method could not be photographed or reproduced and therefore made his opinions unassailable from attack by other experts.

Dr. Louise Robbins¹⁴ is cited by Professor Giannelli for her "Cinderella Analysis" in which she was able to match the insole of shoes found at a crime scene with insoles obtained from suspects. Dr. Robbins, a university professor in anthropology, is reported to have testified for the prosecution in several cases in which William Bodziak, a shoeprint expert for the FBI and author of *Footwear Impression Evidence*, apparently testified on behalf of the defense. In one reported case she testified that size nine tennis shoes found at a scene were a match to a

¹⁰ Giannelli, *The Abuse of Scientific Evidence in Criminal Cases: The Need for Independent Crime Laboratories*, 4 Virginia Journal of Social Policy and the Law 439 (1997).

¹¹ Giannelli, *The Need for Independent Crime Laboratories*, id. at p. 449-53.

¹² Roberto Suro, *Ripples of a Pathologist's Misconduct In Graves and Courts of West Texas*, New York Times, (Nov. 22, 1992).

¹³ Giannelli, *The Need for Independent Crime Laboratories*, id. at p. 453 -57.

¹⁴ Giannelli, *The Need for Independent Crime Laboratories*, id. at p. 458- 62.

defendant's footprint exemplars despite the fact that the defendant wore a size 10 ½ or 11 shoe.

In these three instances each of the "experts" was independent of any law enforcement agency. Obviously such independence did not deter their misconduct. Neither is testimony of a scientifically questionable nature limited only to criminal courts. Peter Huber's book, *Galileo's Revenge: Junk Science in the Courtroom* (Basic Books, 1991) examined the admissibility of "scientific evidence" of questionable validity in the civil law tort system.

Relocation would not likely result even in a different perception with respect to the perceived bias of labs or laboratory personnel. First, law enforcement as the "first responder" to reports of crime and the entity charged with its investigation, will always provide the bulk of the forensic science "business." As investigators law enforcement officers are charged to identify and collect physical evidence. Whether public or private, labs may be unjustifiably accused of having a certain financial stake in keeping their law enforcement "customers" happy. For a private lab the accusation may be more directly aimed at profits derived from services provided to police agencies. For a public laboratory, the claim might be that the public laboratory must justify its budget to a budgetary authority based upon numbers of cases handled and cannot risk losing such cases to some other facility.

Second, regardless of whether a "relocated" or substitute private lab is involved, working relationships would inevitably spring up among personnel from law enforcement, prosecution and the laboratory. This is no different than the working relationships that might develop between investigators and sexual assault nurse examiners. It is unlikely to affect professional judgment in virtually all instances, but nevertheless the claim may be made.¹⁵ The most effective means available to rebut such

¹⁵ In Wyoming we have two principal laboratories for testing criminal evidence, the Wyoming State Crime Laboratory, an agency within our Division of Criminal Investigation under the office of our Attorney General, which provides basic crime laboratory services: DNA profiling, fingerprint examination, firearms examination, chemical identification of drugs and the like, etc. The other laboratory is the Chemical Testing Program in the Department of Health which provides toxicology services for criminal investigations including driving while under the influence offenses and for analyzing urinalysis samples for probationers and parolees under the supervision of the Department of Corrections. In both instances, the laboratories are perceived by most members of the criminal defense community as being "prosecution" or "law enforcement" labs. This is true despite the fact that by statute the State Crime Laboratory is obligated to provide laboratory services to the office of the State Public Defender or to otherwise "needy" defendants. In the past there have been instances of member of the public defenders' office that have availed themselves of these services. Usually this occurred only after defense counsel developed their own working

claims it would seem is not by touting independence but by careful observation of the quality assurance and quality control measures referred to above that permit their own external peer review by a defense expert.

In his original article Professor Giannelli made some of these same points when he wrote:

“As noted above, this proposal is not a panacea. It does not affect defense experts or prosecution experts not affiliated with a crime lab. Nor does it address lawyer incompetence in the use of scientific evidence. Nevertheless, it is a substantial step in the right direction.”¹⁶

Finally, we should consider the gains that might be lost by removing laboratories from law enforcement offices. The number of law enforcement-based labs tripled in size during the 1970s after Congress created the Law Enforcement Assistance Administration (LEAA) in 1968 to assist law enforcement in recognizing, collecting and analyzing physical evidence.¹⁷

It has been suggested that:

“Independent crime labs are a solution, but whether they are politically viable seems doubtful, and they would present some disadvantages.” **fn.453**¹⁸

The accompanying footnote went on to list the disadvantages as follows:

fn. 453. For example: Increasing the laboratory’s geographical or organizational remoteness, however, can limit the effectiveness of the laboratory’s participation in the investigative phases of a case, when its scientific input may have the greatest chance of contributing to justice.¹⁹

relationship with personnel of the lab. This should not be understood as indicating there was a perception of a countervailing bias. To the contrary, it appears that such was the result of a confidence that developed in the integrity of the laboratory scientist or examiner.

¹⁶ Giannelli, *The Need for Independent Crime Laboratories*, id. at p. 478.

¹⁷ Peterson and Leggett, “*The Evolution of Forensic Science: Progress Amid the Pitfalls*,” 36 *Stetson L. Review* 621, 625 (2007).

¹⁸ Giannelli, *Wrongful Convictions and Forensic Science: The Need to Regulate Crime Labs*, 86 *North Carolina Law Review* 163, 228 (2007).

¹⁹ It is axiomatic that an investigation should always follow the evidence. The value of participation by a laboratory in the investigative phase is often overlooked. This is particularly true today when many labs due to a lack of resources must frequently triage testing or examination until a case is scheduled for trial. Testing during the investigative phase can shape and inform an investigation. An investigator cannot follow the evidence when the significance of that evidence is unknown. As Professor Giannelli rightly points out,

Remoteness also makes the police department less able to direct the efforts of the laboratory toward the cases that the department considers most important....”²⁰ [Citations omitted].

A final disadvantage may be found in studies done by the LEAA at a time when the number of crime laboratories were growing at a rapid pace. Those studies demonstrated that police investigators made greater use of physical evidence when forensic laboratories were located more closely to the law enforcement agency.²¹ The appropriate identification and collection of items of apparent evidence always has the potential to appropriately inculcate the guilty offender or exculpate the wrongly accused or convicted. It would be unfortunate for all involved if the legacy of this recommendation were to be a return to poorer evidence collection training and practices.

“We have learned the lesson of history, ancient and modern, that a system of criminal law enforcement which comes to depend on the ‘confession’ will, in the long run, be less reliable and more subject to abuses than a system which depends on extrinsic evidence independently secured through skillful investigation.” *Escobedo v. Illinois*, 378 U.S. 478, 488-89 (1964).

Under the circumstances it might seem wiser to focus the money it would cost to relocate laboratories out of existing accommodations in law enforcement or prosecution agencies into better education, training, equipment, and facilities for everyone involved in forensic sciences. Instead such resources could better be spent in ways that truly enhance the quality of evidence coming from those laboratories.

Chairman Leahy, Ranking Member Sessions, members of the committee, thank you again for the opportunity to present the position of

from time to time the results of forensic testing are helpful to investigators in directing the course of the investigation.

²⁰ This last point is illustrated by an example where “importance” was not measured in terms so much or seriousness of the offense under investigation but rather by the number of serious offenses that could be solved by resort to scientific methods, and arguably thereby prevent other crimes. The example is the Denver DNA burglary project. For more information about this project go to http://www.denverda.org/DNA/Denver_DNA_Burglary_Project.htm or see: The DNA Field Experiment: Cost-Effectiveness Analysis of the Use of DNA in the Investigation of High-Volume Crimes, Urban Institute Justice Policy Center, Roman, Reid, Reid, Chalfin, Adams, Knight, April 2008. DNA Solves Property Crimes (But Are We Ready for That?), Nancy Ritter NIJ Journal No. 261, October 2008. Using DNA To Solve High-Volume Property Crimes In Denver: Saving Money, Lowering Crime Rates and Making Denver Safer, Ashikhmin, Berdine LaBerge, Morrissey and Weber, The PROSECUTOR, Volume 42 / Number 3, July / August / September 2008, NDAA.

²¹ Peterson and Leggett, “*The Evolution of Forensic Science: Progress Amid the Pitfalls*,” 36 Stetson L. Review 621, 625-26 (2007).

the National District Attorneys Association today. I look forward to your questions.