

Comment of Norah Rudin, Ph.D.
House Judiciary Committee
Subcommittee on Crime, Terrorism, Homeland Security, and Investigations Hearing
March 28, 2017
“To examine the state of forensic science in the United States”

Chairman Gowdy, Ranking Member Jackson Lee, and members of the Subcommittee. My name is Norah Rudin and I have been practicing forensic science for over a quarter of a century. I hold a B.A. from Pomona College and a Ph.D. from Brandeis University. I am a member of the California Association of Criminalists, a fellow of the American Academy of Forensic Sciences, and a Diplomate of the American Board of Criminalistics. After completing a post-doctoral fellowship at Lawrence Berkeley Laboratory, I served three years as a full-time consultant/technical leader for the California Department of Justice DNA Laboratory and I have also served as consulting technical leader for the Idaho Department of Law Enforcement DNA Laboratory, the San Francisco Crime Laboratory DNA Section, and the San Diego County Sheriff's Department DNA Laboratory. I have co-authored *An Introduction to DNA Forensic Analysis* and *Principles and Practice of Criminalistics: The Profession of Forensic Science*. I have served a gubernatorial appointment to the Virginia Department of Forensic Science Scientific Advisory Committee and am currently co-chair of the Constitution Project Committee on DNA Collection. Most recently, I had the honor to testify in the PCAST hearings that resulted in their 2017 report. I am also principle in SCIEG, a non-profit company devoted to the acquisition and dissemination of knowledge within the discipline of forensic science (scieg.org). SCIEG houses *Lab Retriever*, a free of charge, open source software program for performing probabilistic genotyping of complex forensic DNA samples.

I have read the legislation proposed by the CFSO. I have read the written statements of the four witnesses present at this hearing, David P. Baldwin, Ph.D., Mr. Matthew J. Gamette, MS, CPM, Victor W. Weedn, MD, JD, and Sandra Guerra Thompson, JD, and I have listened to the entirety of the hearing. Additionally, I have read the statement of the NDAA submitted in connection with this hearing.

In general, I would like to proffer my view that creating a national Office of Forensic Science (OFS) within a law enforcement agency is a fundamentally bad idea. This would take us – both the forensic and legal communities - backwards, not move us forward. The proverbial cliché of the fox guarding the hen house is not inapplicable to such a situation. While no perfect solution to minimize bias, directed or unintentional, exists, institutional separation is one obvious safeguard that is readily implemented. As this office is not yet created, a perfect opportunity exists to install such an office in an adversarially neutral, scientifically supportive, environment. Especially given the ongoing criticisms regarding the scientific foundation of certain forensic disciplines, supporting the science in forensic science would seem particularly opportune. NIST, a scientific and neutral agency, is one appropriate place to house forensic science offices, commissions and groups. That the Forensic Science Commission and the OSAC groups formed as a result of the NAS 2009 report were placed under NIST was not an accident, but a carefully thought-out plan.

Additionally, the composition of the board of the proposed OFS is problematic. It is slanted toward public agencies and provides no voice to independent scientists. Independent scientists are the check and balance on the system. Errors can and do slip through the best of intentioned laboratory systems; some of these errors are caught during independent review by someone looking at the data from a different perspective, with fresh eyes, not subjected to law enforcement oversight. While the forensic community has railed against both the NAS and PCAST reports, the fact remains that these reports, with large input from scientists outside the forensic community, highlight both historical and current voids in the foundation of forensic science practice. Arguments that forensic testimony of various sorts has been accepted by the courts for decades, even centuries, are without merit; a courtroom is not the place to determine scientific reliability and validity. It takes great courage, hence is quite rare, for a judge to rule against a long historical precedent. Court rulings neither confirm nor refute the quality of the science.

The problems that the field of forensic science has been experiencing are largely due to the historically insular approach the field has taken. Perpetuating this attitude will only prolong the problems, not solve them. The greater scientific community has long recognized that an interdisciplinary approach is needed to solve complex problems in thought and technology. The forensic community should also be reaching out and seeking to collaborate with academia. An open, expansive approach rather than circling the wagons, is, in the long term, the only solution to advance the field.

It is typical, and reiterated in several of the statements, to complain of insufficient funds, and to suggest that, with additional funding, all will be well. While monetary support is always required to perform required research and implement the fruits of this research as applied science, without an appropriate framework and infrastructure, indeed institutionalization of a culture of science, the anticipated results of such funding may not be realized. Among other concerns, is directing the money, not only to do more casework, but better casework.

With regard to the hearing, the first thing I noticed is that the four witnesses did not represent the breath of opinion even among forensic practitioners. Mr. Gamette and Dr. Weedn, at least, were clearly present to support the creation of an OFS in the DOJ. Only Ms. Thompson, a lawyer, offered a contrary opinion. I think it will be important to make sure that you truly have a grasp of the different opinions among forensic practitioners, including independent scientists, before making any decisions on this matter. Even among the CFSO, dissent exists. On March 7, the American Academy of Forensic Sciences (AAFS), a member of CFSO, voted *against* the idea of creating an OFS within the DOJ. Interestingly they backed the proposal to create an Office of Forensic Medicine (OFM) within the CDC, something which makes eminent sense. The AAFS is the main and largest national organization of the forensic science profession; for this body to break ranks with CFSO is significant. It should be noted that the AAFS board voted on this issue twice, once at the annual meeting in February, and again in March, after taking extensive comment from members.

A few particular comments caught my attention during the hearing. One was the assertion made by Dr. Baldwin that "Firearms examiner make very few errors." This sentence is underlined in his written statement (the only one so emphasized) and it was also a focal point of his testimony. It is used as a justification for lack of current testing of examiner competence. But if the testing has not been done, how do we know that very few errors have been made? It would be interesting to review the studies upon which Dr. Baldwin relies to make his assertion.

Mr. Gamette was asked during the hearing if he had ever felt pressured to change a result or report a particular conclusion. He was emphatic that he had never experienced such pressure and insisted that the State in which he works is set up so as to avoid such pressure. Unfortunately, the personal experience of Mr. Gamette does not reflect the more general experience and reality of the field. Such pressure comes on a daily basis, sometime subtly, sometime more blatantly, and from both sides of the bar. I have experienced it and I have had many conversations with colleagues (from both the public and private sectors) about the issue. It exists and it is difficult. One such infamous example made headlines.

<http://www.ocweekly.com/news/moxley-confidential-csi-games-if-dna-evidence-doesnt-fit-in-orange-county-alter-it-6362430>

<http://truthinjustice.org/jamesochoa4.htm>

<https://www.innocenceproject.org/signs-of-prosecutorial-misconduct-in-california-exoneration-case/>

<http://voiceofoc.org/2017/01/rackauckas-da-office-likely-to-face-yet-another-investigation/>

In the NDAA statement, they offer the idea that administration is somehow different than affiliation, and that accreditation can somehow guarantee freedom from external and internal pressures. Unfortunately it can do nothing of the sort. Accreditation can only show that, at a point in time – measured once every 5 years – that the laboratory adheres to minimum infrastructure standards. It cannot, nor is it intended to, guarantee correct case results. Statements that internal and external pressures should not exist does not make it so. This is a false hope and a false promise. The laboratory mentioned in the news reports above

was accredited by a recognized group that accredits many laboratories; clearly it did not isolate the analyst from strong external pressure to produce a particular result. A miscarriage of justice was prevented only because an experienced, strong-willed analyst was able to stand up against the pressure.

The NDAA similarly complains about the PCAST report. They suggest that science should be decided by the judiciary, not by scientists. This approach is not only scientifically unsupportable, it does a grave disservice to the fair administration of justice. The judicial system deserves to be supported by the highest quality science, a standard that should emanate from scientists themselves. If forensic science is ever to become a mature science, gain the respect of the wider scientific community, and truly gain a strong scientific foundation for reported conclusions, the various disciplines must be prepared to justify to another scientist that the foundation upon which a conclusion is based is sound.

Thank you for the opportunity to give voice to an alternate point of view.

I offer a few of references for your additional consideration

Mnookin, J.L., Cole, S.A., Dror, I.E., Fisher, B.A., Houck, M.M., Inman, K., Kaye, K.H., Koehler, J.J., Langenburg, G., Risinger, D.M., Rudin, N., Siegal, J., Stoney, D.A., The Need for Research Culture in the Forensic Sciences, *UCLA Law Review* 725 (2011)

Krane, D.E., Ford, S., Gilder J.R., Inman, K., Jamieson, A., Koppl, R., Risinger, D.M., Rudin, N., Taylor, M.S., Thompson, W.C., Sequential Unmasking, A Means of Minimizing Observer Effects in Forensic DNA Interpretation, *J. Forensic Sci*, 53(4), 2008

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