

**TO EXAMINE THE STATE OF FORENSIC SCIENCE
IN THE UNITED STATES**

HEARING

BEFORE THE

SUBCOMMITTEE ON CRIME, TERRORISM,
HOMELAND SECURITY, AND INVESTIGATIONS

OF THE

COMMITTEE ON THE JUDICIARY
HOUSE OF REPRESENTATIVES

ONE HUNDRED FIFTEENTH CONGRESS

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CONTENTS

MARCH 28, 2017

OPENING STATEMENTS

	Page
The Honorable Trey Gowdy, South Carolina, Chairman, Subcommittee on Crime, Terrorism, Homeland Security, and Investigations; Committee on the Judiciary	1
The Honorable Sheila Jackson Lee, Texas, Ranking Member, Subcommittee on Crime, Terrorism, Homeland Security, and Investigations; Committee on the Judiciary**	3
The Honorable Bob Goodlatte, Virginia, Chairman, Committee on the Judiciary	4

WITNESSES

Dr. Victor Weedn, MD, JD, Professor of Forensic Sciences, George Washington University Oral Statement	7
The Mr. Matthew Gamette, Lab System Director, Idaho State Police Forensic Science Oral Statement	9
Dr. David Baldwin, Special Technologies Laboratory, National Security Technologies LLC Oral Statement	11
Ms. Sandra Guerra Thompson, Professor at University of Houston Law Center, Chair at Houston Forensic Science Center Oral Statement	12

ADDITIONAL MATERIAL SUBMITTED FOR THE RECORD

Material submitted by the Honorable John Ratcliffe, Texas, House Judiciary Committee:

<http://docs.house.gov/meetings/JU/JU08/20170328/105786/HHRG-115-JU08-20170328-SD003.pdf>

TO EXAMINE THE STATE OF FORENSIC SCIENCE IN THE UNITED STATES

Tuesday, March 28, 2017

HOUSE OF REPRESENTATIVES,

SUBCOMMITTEE ON CRIME, TERRORISM, HOMELAND SECURITY, AND
INVESTIGATIONS,

COMMITTEE ON THE JUDICIARY,

WASHINGTON, DC.

The subcommittee met, pursuant to call, at 3:00 p.m., in Room 2141, Rayburn House Office Building, Hon. Trey Gowdy [chairman of the subcommittee] presiding.

Present: Representatives Gowdy, Goodlatte, Ratcliffe, Chabot, Jackson Lee, Conyers, and Lieu.

Staff Present: Jason Cervenak, Counsel; Scott Johnson, Clerk; Joe Graupensperger, Minority Counsel; Veronica Eligan, Minority Professional Staff Member; Regina Milledge-Brown, Minority Crime Detailee; Karis Johnson, Minority Legislative Counsel.

Mr. GOWDY. Welcome. The committee will come to order. The Subcommittee on Crime, Terrorism, Homeland Security, and Investigations has come to order. Without objection, the chair is authorized to declare recesses of the subcommittee at any time.

We welcome everyone to today's hearing on forensic science. Just for our witnesses, we are very grateful to have you here, on behalf of Ms. Jackson Lee and myself. And to our guests in the audience, that buzzer you just heard is them calling votes.

So Ms. Jackson Lee and I will give our opening statements. Then we will recess and go vote, and then we will come back and have the hearing, and then there is another vote series on the other side. So, I apologize for any inconvenience. I will give you the names of the people to blame. Neither one of them are in front of you right now.

With that, I will recognize myself on opening statement, and I will tell the witnesses, there is a wonderful opening statement that was prepared and given to me, and I am going to make it part of the record. But I am also going to divert a little bit this morning to talk about something that I am even more familiar with, which is the real-life value of forensic science.

Lawyers do not win cases. Facts win cases, and increasingly, those facts are rooted in science.

Twenty years ago, I met a young man by the name of Ricky Tyrone Samuel. Ricky had a wonderful mother by the name of

Sylvane, who loved him and wanted a good life for him, and Ricky got into a little bit of trouble, as young men, from time to time, do. So, Ricky had a choice: he could follow that sometimes-predictable path for young people who get in trouble, or he could use that incident to try to turn his life around. He chose to turn his life around, and he met with us at the United States Attorney's Office, and he met with Federal law enforcement officers and did what we encourage people to do in all facets of life, which is to accept responsibility and tell the truth.

I was sitting in a courtroom about 6 months after I met Ricky Samuel, well before they had cell phones, and you could feel the pager vibrate. But you cannot look at it, not in a room with a Federal judge. So, it just kept vibrating and vibrating and vibrating, and finally, on a break, I looked and saw those ominous numbers, 911, connected with a callback number to an ATF agent who I was working the case with. And I called the ATF agent back, and he said Ricky Samuel's body was found this morning on his knees beside an isolated, tranquil pond in northern Greenville County. No witnesses except the trees. No shell casings. Just a single bullet, execution-style, in the back of his head.

Now, I knew exactly who was responsible for killing Ricky Samuel. His name had just been released to the criminal defense attorneys that were defending someone in a Federal criminal trial; just released the name in discovery. But knowing something and proving something are two entirely different things. I knew who was responsible; now, we had to prove it.

In Ricky's home in Spartanburg, there was a Bible, and that is not unusual in South Carolina to find a Bible, but this one was brand new. It was a gift from a man who had been visiting in the neighborhood, going door to door trying to introduce people to Jesus. So, the police took that Bible into evidence for some reason. They logged it in.

Now, on a single, solitary page in a single, solitary book called Ezekiel was a fingerprint. Wouldn't be unusual to find a fingerprint in my wife's Bible or my grandmother's Bible. Pretty unusual to find one in a brand-new Bible. So, the police ran that fingerprint through the database and it came back to a Bob Harry Fowler. Mr. Fowler was not a preacher. Mr. Fowler was not an evangelist. Mr. Fowler was a contract killer sent to Spartanburg, South Carolina to kill a Federal witness.

I do not remember the name of the technician. I do remember the name of the judge. I remember the name of the defense attorney. I remember the prosecutor who took the lead in that case because it is the best prosecutor I have ever seen in my life or ever will see in my life, a man by the name of David Stephens. What I remember most of all is that Ricky Samuel's mother now knows who killed him. And she knows who killed him because a technician took the time to flip through every single page of a piece of evidence that most lawyers would have said, "do not even collect it."

Nothing can mitigate the pain of a loss, but knowing that the people who took your son's life are serving life without parole in Federal prison is at least one way to close the chapter, at least on the criminal justice part of it. A single, solitary fingerprint on a

single, solitary page in the Book of Ezekiel was the single best piece of evidence that we had in what was the only Federal murder case in the last 25 years in the upstate of South Carolina.

It is because of science. Science convicts. Science exonerates. Science is what the jury wants. Science is what the jury needs. And with that, I would recognize the ranking member from Texas.

Ms. JACKSON LEE. Mr. Chairman, what a powerful and eloquent statement, and it captures the essence of this hearing, and it shows that the issue of the state of forensic science in the United States helps victims in many ways: the victims of a heinous crime, or the victim of being convicted incorrectly. And that is what justice is about.

I am delighted to welcome Dr. Weedn from George Washington University, who I know all will be introduced as we return. Mr. Matthew Gamette from Idaho State, Dr. David Baldwin from the National Securities Technologies Limited, and of course, Professor Sandra Guerra Thompson of the University of Houston Law Center and the chair of the Houston Forensic Science Center.

I want to take note of the fact, in my home city of Houston, one such cardinal incident regarding someone convicted wrongly led to the creation of the Houston Forensic Science Center, which my constituent and our distinguished guest, Professor Sandra Guerra Thompson, chairs as the preeminent national model for forensic science practices.

The Houston Forensic Science Center became a distinguished model as a result of the willingness of the law enforcement and judicial community of Harris County to collectively recalibrate outdated practices relied upon during the George Rodriguez case and so many others leading to wrongful convictions.

Mr. Rodriguez was sentenced to 60 years in prison in 1987 for sexual assault. His conviction was based on inaccurate body fluid evidence and hair analysis. One important aim in the quest for reliability in forensic scientific evidence, which I look forward to hearing the witnesses' testimony, is to acknowledge and correct the calamities of our judicial system's failure to obtain the ends of justice rightly and claiming as casualty those who have been wrongfully convicted in our communities.

In 2001, the Innocence Project took on the Rodriguez case. A judge ordered testing on the remaining evidence. A showing was made that the Houston Police Department's HPD crime laboratory, as has been found common among investigatory facilities in many jurisdictions, mishandled, not purposely, the retesting of biological materials, and the laboratory was ultimately shut down due to the insecure integrity of its work in numerous cases. After a man erroneously served 17 years in prison, we must consider the serious consequences of such cases where subsequent laboratory retesting excludes suspects like Mr. Rodriguez as a viable match to all DNA evidence, allowing his conviction to be vacated and affirming the innocence he maintained all around.

The scales of justice, Lady Justice, requires that we adhere to the principles of justice, and that is that those who do the crime are under the hand of justice, receive the penalty. Those who are innocent receive the victory.

The HFSC, which operates independently of law enforcement and with full transparency, is now in place, beginning in 2014, with a mission to receive and analyze and preserve physical and digital evidence.

Let me take note of the fact that this crime lab is the only crime lab in the Nation to implement blind proficiency testing. So, I am very glad to look forward to the testimony. And they have overturned 119 convictions. George Rodriguez is one of the cases, Mr. Chairman, that they have done so.

Let me, again, acknowledge the importance of this hearing, but as well, let me acknowledge the importance, Mr. Chairman, of us working together on a number of other issues. As we look at these witnesses, I would like to see hearings dealing with a restoring or reviving the effort that we made on criminal justice reform, which would include sentencing reduction—in the last Congress, it was H.R. 3713; to see prison reform, which we introduced in the last Congress; and as well, the Tiffany Joslyn Juvenile Block Grant Reauthorization and Anti-Bullying Prevention and Intervention Act, and then the Law Enforcement Trust and Integrity Act.

Both of us serve on the Police Working Group, and we recognize our important Congress influence in that. And I do believe both of us serve on the Crime, Terrorism, Homeland Security, and Investigations, which this committee is, and this hearing pertains specifically to that.

The bills that I just suggested pertain specifically to rendering a criminal justice system that is fair to all, Mr. Chairman, but we do deal with issues of criminality, and I believe that it is important, without making any suggestions, that we get the information under our jurisdiction relating to issues of Russia, Russian collusion, and also any comments being made about the actions of a former President as it relates to wiretapping. I know that we will have FISA hearings, but I hope that we will be able to pursue these, as I know the Senate subcommittee so named did the same.

I want to thank you, Mr. Chairman, for yielding to me, and I look forward to working with you on a number of issues, including what we are having before us, as well as the issues that I indicated in my remarks. With that, I yield back.

Mr. GOWDY. Well, I will thank the gentlelady from Texas, and I would agree with her 100 percent. We need a justice system that is not only respected, but one that is worthy of respect, and you have been a champion in any number of regards on that, and I look forward to working with you as we try to make sure we have a justice system that is respected.

With that, Ms. Jackson Lee and I will retire to vote. I mean that figuratively, not literally. We will go vote, and we will come back. And please accept our apologies for any delay. We will be back as quickly as we can.

And with that, we are in recess.

Mr. GOWDY. The committee is back in order. The chair will now recognize the gentleman from the great State of Virginia, the chairman of the full committee, Mr. Goodlatte.

Chairman GOODLATTE. Well, thank you, Mr. Chairman. I thank you very much for holding this important hearing today.

The use of forensic science to solve crimes has existed for centuries. One of the first recorded examples occurred in the year 1248. A Chinese book entitled *The Washing Away of Wrongs* detailed how to differentiate between strangulation and drowning. It is believed to be the first recorded application of medical knowledge used to solve a crime.

Fast forward 739 years to the year 1987, and the field and the world witnessed a truly remarkable breakthrough in forensic science. While I am certain that our distinguished panel is familiar with the names of Richard Buckland and Colin Pitchfork, some may not be familiar with their story. Their story is the same story, but one with vastly different endings.

In 1983, and again in 1986, two 15-year-old girls were raped and strangled to death. Using forensic science techniques available at the time, police linked samples taken from their bodies to a person with type-A blood and an enzyme profile that matched only 10 percent of males. The prime suspect was Richard Buckland, a 17-year-old juvenile.

In the time between these two linked murders, Dr. Alec Jeffreys, a genetics researcher at the University of Leicester, developed DNA profiling, along with Peter Gill and David Werrett. Dr. Jeffreys and his colleagues demonstrated that it was possible to obtain DNA profiles from old samples. Using this technique, Dr. Jeffreys compared samples from both murder victims against a blood sample from Buckland and conclusively proved that both girls were killed by the same man, but not Buckland.

Thus, Buckland became the first person to be exonerated through DNA testing. Dr. Jeffreys would later go on to state that he had “no doubt whatsoever that Buckland would have been found guilty had it not been for DNA evidence.”

Police undertook an investigation in which more than 5,000 local men were asked to volunteer blood or saliva samples. After 6 months, no matches were found. In August of 1987, a coworker of Colin Pitchfork revealed to fellow workers in a pub that Pitchfork had paid him to give a sample while pretending to be Pitchfork. A bystander who overheard the conversation reported it to police. The following month, Pitchfork was arrested. Pitchfork confessed to both murders, and scientists found that his DNA profile matched that of the murderer. Thus, Pitchfork became the first person convicted of murder based on DNA profiling evidence.

Over the ensuing 3 decades, law enforcement has come to rely on forensic science every day. Forensic science produces investigative leads and helps exonerate or convict persons of interest. It remains today, and will continue to be in the future, an invaluable tool in solving crimes of all types. In order for forensic science to be effective, it must be based on sound science and practiced by highly-skilled and trained professionals. The Federal Government should do its part to encourage State and local law enforcement to utilize critical DNA analysis.

The House Judiciary Committee is doing its part.

Last Congress, this committee reported out the Rapid DNA Act of 2016, a measure authored by the gentleman from Wisconsin, Mr. Sensenbrenner. The Rapid DNA Act amends the DNA Identification Act of 1994 to require the Federal Bureau of Investigation to

issue standards and procedures for using rapid DNA instruments to analyze DNA samples of criminal offenders. While it once took days or weeks to ascertain, DNA testing can now be completed in a matter of hours. The Rapid DNA Act would ensure that this technology would be available to local law enforcement agencies.

As our criminal justice system continues to rely heavily on forensic science, we need to ensure that the public's confidence in that system remains high, and this committee will do its part to meet that goal. I want to thank our witnesses, and I look forward to your testimony today. I yield back, Mr. Chairman.

Mr. GOWDY. The chair thanks the gentleman from Virginia. It is now my pleasure to introduce our distinguished panel of witnesses. I will begin by asking you to please rise and take the oath, which we administer to all witnesses in this committee.

Would you please raise your right hand? Do you swear the testimony you are about to give will be the truth, the whole truth, and nothing but the truth, so help you God?

Let the record reflect all the witnesses answered in the affirmative. You can have your seat.

I will introduce you en banc, and then I will recognize you individually. We will just say up front, given the fact that we have a pretty tight window given the votes on the other side, your complete statement is in the record, and all members of the committee will have a chance to look at it. And I am going to have a little bit of help introducing witnesses today because we have some folks that are interested in helping with that. So, give me one moment.

Our first witness is Dr. Victor Weedn. He is a professor of forensic sciences at George Washington University. He is also a forensic pathologist and an attorney, who established the Armed Forces DNA Identification Lab, served as the medical examiner, and directed a regional crime laboratory.

Dr. Weedn recently concluded his detail as senior adviser to the Deputy Attorney General at the U.S. Department of Justice.

Our second witness is Mr. Matthew Gamette, and if I mispronounce your names, I apologize, and you feel free to correct me. And I probably did, based on your expression. Mr. Gamette has extensive experience in forensic sciences, having served in academic research and law enforcement capacities. He is currently the laboratory system director of the Idaho State Police Forensic Services.

Mr. Raúl Labrador wanted me to welcome you. He is on the committee, but not the subcommittee.

Our third witness is Dr. David Baldwin, manager and principal investigator for research supporting forensic science at the Special Technologies Laboratory of National Security Technologies, LLC. Dr. Baldwin formerly served as director of the U.S. Department of Energy's laboratory in Ames, Iowa. He is a graduate of Lebanon Valley College and the Massachusetts Institute of Technology. And with that, I would recognize my colleague from Texas to introduce our final guest.

Ms. JACKSON LEE. Mr. Chairman, thank you for your courtesies. I am privileged to be able to introduce Professor Sandra Guerra Thompson, and I want to say how delighted I am that you had come back home, being a Laredo native, and that we have you here in Houston, Texas, in my district.

You are the alumni college professor in law and director of the Criminal Justice Institute at the University of Houston Law Center. Since joining the faculty in 1990, she has authored numerous articles on criminal law topics, such as eyewitness identification and wrongful conviction, immigration crimes, jury discrimination, police interrogations, Federal sentencing, and asset forfeiture.

She is a recipient of the University of Houston's Distinguished Leadership in Teaching Excellence in 2015; students love her—as well as a Teaching Excellence Award in 2003, and the Ethel Baker Faculty Award in 2000. She has received numerous awards, and she was the editor of the Yale Law Journal, and a graduate of Yale University, B.A., and a J.D. from Yale University. And so, she's a fellow alum.

Thank you so very much, and you are welcome. I yield back, Mr. Chairman.

Mr. GOWDY. The gentlelady yields back. Welcome to all of our witnesses.

Dr. Weedn, you will be recognized for 5 minutes.

Chairman GOODLATTE. Mr. Chairman, I don't believe the witness has a microphone on.

Mr. GOWDY. That is a very good piece of investigatory work, Mr. Chairman.

Dr. WEEDN. Excuse me.

Mr. GOWDY. No forensics needed.

STATEMENTS OF VICTOR WEEDN, PROFESSOR OF FORENSIC SCIENCES, GEORGE WASHINGTON UNIVERSITY; MATTHEW GAMETTE, LAB SYSTEM DIRECTOR, IDAHO STATE POLICE FORENSIC SCIENCE; DAVID BALDWIN, SPECIAL TECHNOLOGIES LABORATORY, NATIONAL SECURITY TECHNOLOGIES, LLC; SANDRA GUERRA THOMPSON, PROFESSOR, UNIVERSITY OF HOUSTON LAW CENTER, AND CHAIR, HOUSTON FORENSIC SCIENCE CENTER.

STATEMENT OF VICTOR WEEDN

Dr. WEEDN. I am sorry. Well, Chairman Gowdy, Ranking Member Lee, and other members of the subcommittee, good afternoon. It is an honor and a privilege to be here. Thank you for the opportunity to address the committee on this important topic.

Forensic science has become critical to our criminal justice system. And while forensic science has been important for some time, its pervasive use, power, and household familiarity has been a relatively recent phenomenon. Governments and the criminal justice system are still adjusting to this development. This adjustment within the Federal Government is lagging.

The voice of the forensic science community is not commensurate with this new role, and accordingly, the forensic science community has been relatively neglected and inadequately supported.

The 2009 National Academies of Sciences report on the forensic sciences criticized the practice of forensic science in the United States and recommended enhanced standard-setting efforts, increased research and development to ensure adequate scientific foundations, and autonomy from law enforcement pressures.

To address the standards, the Department of Justice reached out to the National Institute of Science and Technology, or NIST, and transferred the standard-setting activities from DOJ scientific working groups to establish the NIST OSAC, the Organization of Scientific Area Committees, which is effectively and independently advancing and recommending standards in the field. However, the OSAC is not codified and does not have a permanent funding stream. Therefore, its future is in question. It should be institutionalized and codified.

On the other hand, research and development has not advanced as much as is needed. Recently, the President's Council of Advisors on Science and Technology, or PCAST, criticized the scientific foundations of pattern and impression evidence. And while the interpretations and conclusions of the PCAST report are debatable, the report is absolutely correct on the need for additional research to enhance capabilities and instill confidence in the examination and tests performed every day by the forensic science community.

Furthermore, forensic science, as currently practiced, is stressed and inadequately supported. The Bureau of Justice Statistics' latest census of publicly-funded crime laboratory reports significant casework backlogs. Important discussions on DNA mixture deconvolution, statistical interpretation, and language for reporting and testimony need Federal attention. Presently, the only grant available that exists for addressing at least some of these issues is the Paul Coverdell Act, which you recently reauthorized in the Justice for All Reauthorization.

While detailed to DOJ as the senior forensic adviser to the Deputy Attorney General, it became clear to me that the creation of an outwardly-facing, grant-making Office of Forensic Sciences, or OFS, from a consolidation of existing programs within DOJ, given a forensic science mission and an elevated position within the DOJ structure, and with an advisory board from leaders in the forensic science community outside of DOJ, would be an important step to correct many of these concerns.

The currently-existing unit within DOJ that most closely resembles this activity is the Office of Investigative and Forensic Sciences, buried within the Office of Justice Programs in the National Institute of Justice, the research development and evaluation arm of DOJ.

NIJ's mission statement does not specifically mention forensic science. NIJ began primarily as a social science research institution, largely catering to academic departments of criminology. Under the original 1968 legislation, NIJ was authorized "to carry out programs of behavioral research designed to provide more accurate information on the causes of crime and the effectiveness of various means of preventing crime, and to evaluate the effectiveness of correctional procedures."

The Division of Science and Technology was created in 1992 with a budget of between \$2 and \$4 million annually and a staff of four. By 1994, the successor Office of Science and Technology, or OST, represented 18 percent of NIJ's overall budget, and by 2008, the budget for OST represented more than 80 percent of NIJ's overall budget, while the social science research budget stagnated. Thus, NIJ was created and continues as a social sciences shop, but the

hard, forensic science component has grown so fast that the social scientist directors of NIJ often feel compelled to hold down the forensic science, so that it will not consume their social science budget.

Social science and forensic science should not compete within the same division headed by a social scientist. The OFS director should be a forensic scientist with stature in the field, while the NIJ should continue as a social science shop and with a social scientist director.

Such an office would provide a voice for forensic science appropriate to its new role and would provide a vehicle for support to the State and local community that performs about 95 percent of forensic science testing in the United States. Such an office would also establish a mechanism to combat the opioid crisis, if funded.

I have provided to the committee documents that I wrote regarding how this could occur. I appreciate this opportunity to address the committee on such important matters, and I look forward to your questions.

Mr. GOWDY. Thank you, Dr. Weedn.

Mr. Gamette?

STATEMENT OF MATTHEW GAMETTE

Mr. GAMETTE. Chairman Gowdy and Ranking Member Jackson Lee and members of the committee, my name is Matthew Gamette, and I am a laboratory system director for the Idaho State Police Forensic Services Laboratories, with three multi-disciplinary laboratories and 44 employees. I am also the chair of the Consortium of Forensic Science Organizations that represent six major forensic science organizations. We have over 21,000 practitioners that we represent.

Approximately 95 percent of the forensic work in this country is done by State and local forensic science service providers, or FSSPs, like my laboratories. Requests for service and analysis are exponentially increasing, and the funding is steadily decreasing for most forensic science disciplines.

From 2011 to 2015, the number of heroin submissions to my laboratory increased 586 percent. In roughly the same period, the CDC reported a national increase of 248 percent in drug poisoning deaths attributed to heroin. In Idaho alone, the number of deaths attributed to heroin in that period increased 1,100 percent. Labs around the country are being overwhelmed with cases involving heroin, synthetic drugs, marijuana, and other drugs of abuse. The Maryland medical examiner's office workload has increased 300 percent since 2014.

Because of the associated increase in autopsies per pathologist, the Connecticut medical examiner's office has lost their full accreditation, and the Maryland medical examiner's office is in danger of a downgrade to its accreditation. Federal legislation and funding has largely addressed treatment and enforcement, but resources have not been allocated for labs, coroners, and medical examiners to deal with this heroin epidemic.

Other disciplines are also seeing increased requests. In Idaho, latent print submissions are up 80 percent, and drugged driving submissions are up 88 percent over the last 2 years. Nationwide, there

are 3.8 million requests each year for forensic examinations in support of the criminal justice system.

Not surprisingly, there are case backlogs all over the country. Labs cannot develop new methods fast enough and cannot afford the equipment to keep up with emerging issues like these drug issues. The delay in analyzing evidence creates delays in the criminal justice system, affecting speedy trial rights of defendants.

These caseloads, backlogs, and personnel shortages are only an estimate for major State and local laboratories. There is still no estimate of how many FSSPs exist in the country. The Bureau of Justice Statistics surveys 409 larger laboratories on a regular basis, but the number of small, latent, print-and-identification units, digital forensics laboratories, and other one- or two-person forensic practitioner units is still unknown. The shortfalls I report on today are surely greater than we can now calculate.

Many years ago, the community itself pushed to adopt more robust international accreditation standards, and last year, the Attorney General recognized the importance of accreditation for crime laboratories in a directive she published that all Federal labs would be accredited by 2020. While 99 percent of State laboratories are accredited, many small operations are not. The most frequent obstacle to accreditation is the cost. The Maryland medical examiner's office spent 54 million on facility needs to meet accreditation requirements. It costs hundreds of thousands of dollars each year in positions, training quality assurance to meet all of the stringent quality and management criteria of accreditation in my laboratory.

Training and ongoing education is another imperative for laboratory personnel. Training in most laboratory disciplines can take several years and cost the laboratory hundreds of thousands of dollars to train one, single examiner.

Training is also a desperate need in the areas of forensic nursing and forensic pathology. It is extremely difficult to recruit and retain the number of medical doctors, who are pathologists, needed to perform forensic autopsies. The Paul Coverdell Granting Program is critical for forensic science service providers. Each year, we encourage DOJ and the White House to include Coverdell in their budget recommendations. It is extremely disappointing that, with the critical needs of forensic science, this funding has not been recommended in the President's budget for some time.

Fortunately, Congress and this body has stepped up with Coverdell funding in support of forensic science. Coverdell is one of the only Federal granting programs for medical examiners and also many laboratory disciplines. While we are extremely grateful for the funding, so much more could be done with a fully-appropriated Coverdell program, and we encourage you to fund Coverdell to the full authorization amount.

The Department of Justice reported that 125 excellent requests were made last year for Coverdell competitive funding that were not able to be fulfilled due to a lack of funding. Over \$14 million in needed instrumentation and training from mostly State and local labs could not be funded to support the criminal justice system of this country. Even a very small investment in the Federal budget could make a huge difference in this community.

We believe that more input is needed, from State and local practitioners to high-level decision makers at DOJ, to communicate the outcome opportunities and challenges of Federal granting programs. Sometimes, small changes in a granting program can have huge, unintended impacts and consequences on State and local practitioners. We believe that even more substantive conversations are needed with DOJ and Congress regarding forensic operational needs, research needs, technology transfer, and impacts of DOJ policy on State and local labs. More resources are needed; more State and local issues must be discussed; and ultimately, more Federal leadership is needed in forensic science practice in the United States.

Mr. Chairman, the American Society of Crime Laboratory Directors, the National Association of Medical Examiners, the Society of Forensic Toxicologists, the American Board of Forensic Toxicology, the International Association of Identification, and the International Association of Forensic Nursing supports the OFS as laid out previously by Dr. Weedn.

Mr. GOWDY. Thank you, Mr. Gamette.
Dr. Baldwin?

STATEMENT OF DAVID BALDWIN

Dr. BALDWIN. Good afternoon, and thank you, Chairman Gowdy and Ranking Member Jackson Lee, for this opportunity to address the subcommittee. I want to talk to you today about the need for a wide range of research and development in the field of forensic science.

I am telling you this based on almost 20 years of working with the forensic science practitioner community to understand the challenges that community faces in delivering the best scientific analyses they can for our legal system. I have worked with these practitioners in partnerships on research projects, developing and delivering new training, and building partnerships with universities to improve forensic education, and collaborating with lab directors to find better business and operations methods, and in participating in the community's standard-setting organizations.

My perspectives on research needs in this field have come from the community's critical introspection, as well as the aspiration of these science professionals. Some of the most topical and timely research needs relate to studies to better understand the reliability, and therefore the value, of forensic science analyses. My particular interests are in research for the pattern evidence fields. Many of these same issues and areas apply more broadly across all of forensic science. In order to communicate the proper weight and value to give to a particular scientific analysis, it is important to have an idea of the reliability of the evaluation. Some of these studies, sometimes called black box studies, have been performed, and more are anticipated.

Given my prior experience in designing and executing a reliability study for firearms analysis, I am convinced that research is needed to help develop 3-D imaging technologies that preserve evidence and present it in a way that can be used by examiners for comparisons. There are several reasons and benefits to this development. The most immediate has to do with the issues associated

with assembling one of these studies. Firearms examiners make very few errors. When you design an experiment to measure a very small error rate accurately, you need a large sample set with lots of materials, lots of examinations, and many participants. Use of 3-D image sample sets will greatly reduce the difficulty and cost of assembling these studies, allowing faster progress on these priorities.

A lot of this research has begun at some level. The current environment for forensic science research includes resources managed by many agencies across the Departments of Justice, Commerce, Defense, and Homeland Security. It is important to understand that forensic science is still a developing field of research and development. To encourage that development, the field needs more than a handful of studies and a few more practitioners. There needs to be sustained, fundamental basic and applied research, advanced engineering, and robust testing and evaluation. This level of effort needs to attract students, faculty, and lab researchers that dedicate their careers to forensic science research.

Over the years, I have developed programs to partner with crime laboratories to provide resources to satisfy a wide range of needs. During my time at Ames Laboratory in Iowa State University, I and my colleagues developed a strong partnership with Federal, State, and local crime laboratories in a 16-State region to provide access and a means to develop resources for forensic science. It was called the Midwest Forensic Resource Center. The goals of the center, developed with our stakeholder partners, were to provide access to experts and unique instrumentation, to develop and deliver shared training to improve the level of interaction between crime labs and forensic science educational programs, to perform research and collaboration with crime labs, and to test and evaluate new business and infrastructure models for public laboratories.

I recently left the University and Federal Ames lab. I now work as an R&D manager at Special Technology Laboratories. SCL is a division of National Security Technologies, an NSA-owned research facility. I am here working with some of my old partners from the MFRC, such as Director Gamette of Idaho, to establish a new resource center for the Western States region. This new center is to be built around the resources of STL in California and the Nevada National Security Site and the Remote Sensing Laboratory in Nevada. We believe this partnership will continue to find effective ways of developing and delivering resources to improve forensic science.

I want to thank you for the opportunity to speak with you today and share my vision of what needs to be done to move forensic science forward.

Mr. GOWDY. Thank you, Dr. Baldwin.

Ms. Thompson?

STATEMENT OF SANDRA GUERRA THOMPSON

Ms. THOMPSON. Chairman Gowdy, Ranking Member Jackson Lee, thank you for your invitation to be here. I want to echo the comments made by the panelists today, and I would also add my concern, which is that I believe that forensic science should be moved in the direction of independence from law enforcement. My

comments today are based on extensive national research that I did for a book which was published in 2014 called *Cops in Lab Coats: Curbing Wrongful Convictions through Independent Forensic Laboratories*, as well as my work as the vice chair of the board of directors for the Houston Forensic Science Center, Houston's crime lab.

Local communities pay dearly when forensic science gets it wrong. Wrongful convictions ruin lives and families. Hundreds of people have been wrongly convicted through faulty forensic science, and those are only the ones that we have discovered. When innocent people are wrongly convicted, victims do not get true justice, and actual perpetrators remain at large, often committing more crimes against more victims. And local taxpayers lose when localities are forced to pay millions of dollars in damages and when localities are forced to conduct large, retrospective reviews of thousands, and even tens of thousands, of past convictions to determine whether the same, flawed forensic evidence may have been present in those cases, as well. And the most important concern is that communities lose faith in the entire criminal justice system if there are wrongful convictions caused by faulty forensic science.

Houston learned this the hard way. The Houston Police Department crime lab was once called the worst crime lab in the country by the *New York Times* in the early 2000s. From 2002 to 2009, the HPD crime lab struggled, and the city paid millions of dollars in damages and for remedial efforts. But this is not a unique story.

In Ohio, the Cleveland Police Department crime lab had similar exonerations and multimillion dollar damages from lawsuits. Labs in Florida, Maryland, New York, California, Massachusetts, Montana, West Virginia, and many others have had serious, documented scandals, as well. Some analysts have been arrested. Others have committed suicide. Some labs have been closed. For example, most recently, the Austin Police Department's DNA lab is undergoing such a closure and major scandal, as well.

In 2009, the National Academy of Sciences published its comprehensive landmark report calling for many changes to improve the nature of forensic science, and it made repeated calls for making forensic laboratories independent from law enforcement.

Independence reduces the influences that can create motivational bias and unconscious, cognitive biases. It can better position labs to obtain adequate funding; whereas laboratories within police departments constantly compete against other, seemingly more pressing police priorities. Moreover, law enforcement administrators are not generally qualified to supervise a scientific enterprise.

The city of Houston closed its HPD crime lab in 2014 and created an independent lab, the Houston Forensic Science Center. This lab has quickly become a pioneering forensic laboratory that now serves as a national model. It operates transparently and efficiently and employs cutting-edge quality control procedures that have brought it national and international recognition. As Congress considers the future of forensic science, I urge you to keep in mind the critical need for independence as recognized by our country's most esteemed scientists in the NAS report.

Consider this excerpt: "There is strong consensus in the NAS committee that no existing or no new division or unit within DOJ would be an appropriate location for a new entity governing the fo-

rensic science community. DOJ's principal mission is to enforce the law and defend the interests of the United States according to the law. The entity that is established to govern the forensic science community cannot be principally beholden to law enforcement. The potential for conflicts of interest between the needs of law enforcement and the broader needs of forensic science are too great."

To conclude, I believe that scientists should administer and oversee the effort to improve forensic science. This is not to say that law enforcement should not serve an advisory role, but the administration of forensic science research and the development of protocols and standards should be situated within scientific institutions, not law enforcement agencies, and I say this as a prior prosecutor myself. Thank you.

Mr. GOWDY. I thank the witnesses for their opening statements. The chair would now recognize the chairman of the full committee, Mr. Goodlatte, for his questions.

Chairman GOODLATTE. Thank you, Mr. Chairman. Dr. Weedn, with respect to your proposal for the Office of Forensic Science within the Department of Justice, how can we be confident that it will maintain autonomy within the department, and how much would something like that cost?

Dr. WEEDN. First, the proposal is primarily a consolidation of existing programs, so it is largely revenue-neutral. The autonomy issue, I believe that, by raising the voice of forensic scientists within the Department of Justice, you now have a voice that can stand up to other pressures. Right now, forensic science is not being spoken to by forensic scientists, if at all.

Also, the Office of Forensic Science could have statutory language that could help in this regard. The National Academy of Sciences performed a study on the NIJ and said there needed to be greater independence, and the result of that was a final approval authority. That same final approval authority could be given to this OFS. We also could have the office make sure that they adhere to the scientific and research integrity policy of the department.

Chairman GOODLATTE. Thank you. Let me interrupt there.

Since I have got a limited amount of time, I want to follow up with Mr. Gamette on that question. In Idaho, what safeguards do you have in place to ensure autonomy from law enforcement, given that you report to the State police?

Mr. GAMETTE. Thank you, Mr. Chairman. I do work for the Idaho State Police. I work in the Forensic Services Division of the Idaho State Police, and we have taken great cautions to assure autonomy of our laboratory system from the parent agency.

So, one of the things we do is we hire scientists to work in the laboratory. We hire people with bachelor's degrees, master's degree, and Ph.D.'s to work in the laboratory system. We have a laboratory system director, myself. My position was created 2 years ago to assure that autonomy. And also, I have a background in science. My degree is in science. We have accreditation requirements that require that we are autonomous from our parent organization and that we take safeguards there, several standards, international standards that we abide by, and that we are assessed and audited to on a yearly basis.

I also believe it is a concept of strong leadership and management within the scientific community, within our scientific community, in our laboratory. We have a strong management system of scientists. Our budget is set by our State legislature. They review all of the budgets that we have. The governor's office reviews the budgets that we have. We have strong reporting to our court systems, to our supreme court in the State, and we have made it a priority in our State to do forensic science—

Chairman GOODLATTE. Let me interrupt and ask, do you ever feel undue pressure from law enforcement to reach a particular conclusion in a case?

Mr. GAMETTE. Chairman, I have worked in forensic science for 15 or 16 years, and in that amount of time, I have never felt pressure from a law enforcement officer or entity to reach a certain conclusion or to alter a conclusion that I had reached—

Chairman GOODLATTE. Good.

Mr. GAMETTE. In favor of law enforcement.

Chairman GOODLATTE. What do you think of Dr. Weedn's proposal for an Office of Forensic Science at the Justice Department?

Mr. GAMETTE. I believe it is strong. I support it. I believe it brings increased visibility at the Department of Justice. It gives us more visibility on issues like Coverdell.

For example, the Department of Justice has continually not requested funding for Coverdell. We continue to come to Congress and ask for that funding to be restored. We believe that a stronger voice within the Department of Justice will raise that level of interest in that issue. We also believe it will result in better communication with State and local laboratories.

I would point to the FBI hair review process. Most of the State and local laboratories will be impacted by that. They will have to do reviews on the State and local level. Now, with those things, the communication was not flowing from the FBI for a long period of time. Hopefully, we fixed some of that, but prosecutors were somewhat surprised when they got letters from the FBI and didn't know how to deal with that.

We need resources for emerging issues, and it is important for us to be able to communicate with DOJ what those emerging issues are.

Chairman GOODLATTE. Let me cut you off there, too, because I am interested in the emerging issues, but I am also interested in hearing Ms. Thompson's perspective on what we have just been talking about.

So, do you think that a forensic scientist employed by a law enforcement organization can be unbiased?

Ms. THOMPSON. I can, and I do not think that the recommendations to make forensic science independent from law enforcement is, in any way, an indictment on the integrity of the forensic scientists themselves. That is not the point.

The point is that, at the end of the day, the Department of Justice is a law enforcement agency headed by law enforcement, and my belief is that forensic science institutions, organizations should be independent of those law enforcement agencies, so that they are directed by individuals who have an understanding of the culture of science. And I think the arguments that are made here today for

an Office of Forensic Science are made largely on the view that, to date, the Department of Justice has not prioritized forensic science in the way that it should, that they have not come looking for Coverdell funding and the like. And so, I think the track record is one that proves my position.

Chairman GOODLATTE. Thank you very much, Mr. Chairman. Thank you to the witnesses.

Mr. GOWDY. The gentleman from Virginia yields back. The chair would now recognize the gentleman from Michigan, the ranking member of the full committee, Mr. Conyers.

Mr. CONYERS. Thank you, Chairman Gowdy. I want to join you in saluting these witnesses, and that you would pick this subject to bring to the attention of not only the members of Congress, but our citizens across this great land on the state of forensic science in our country. I think it is so important.

And so, Professor Thompson, I wanted to direct a couple of notions, ideas, to you. How are you, as an independent laboratory, able to support opportunities for science and law enforcement to work together?

Ms. THOMPSON. So, with regard to our experience in Houston, the laboratory works closely with the Houston Police Department. It is independent of the police department, but we work with the investigators, and we listen to them, and we have regular discussions with them to ensure that the work that is being done meets their needs.

And so, for example, in the latent print area, there was a backlog that developed because the laboratory tests were not being properly coded, and they were not getting to the lab. So, we ended up with an enormous backlog of a year's worth of work that was brought one day to the lab. Well, in discussions with the investigators, our lab examiners were able to devise a new method for providing them with quick responses, so that they could quickly exclude people whose prints had been picked up and report back on investigative leads in other cases. And that kind of expedited process came through this regular communication that we have with the police department.

At the same time, however, there is a culture in this lab that it does not report to law enforcement. The culture is that our client is the criminal justice system, as a whole, and the citizens of the city of Houston, and I think it is a very important culture that is created that we have tried to foster.

Mr. CONYERS. How was it that, in Houston, you came across or developed the first independent way to approach forensic science?

Ms. THOMPSON. The best that I can say, sir, is that Houston tried, for many years, to improve the reputation of the Houston Police Department crime lab, but the lab was so dysfunctional and had so many problems in so many disciplines, and so many wrongful convictions, and the reporting on it was persistent for so many years that, ultimately, when the National Academy of Sciences came out with its report calling for independence, city leaders decided that, perhaps, that was the only way to finally put the scandal behind them.

And so, they decided to take a very bold step and remove the lab from the administration of the police department and create what

is called local government corporation. It is overseen by a board of community volunteers, such as myself, together with a Technical Advisory Group. And I will say, the Technical Advisory Group has forensic scientists on it, but it also has university research professors, as well, research scientists. And so, it is a completely different model of administration, but it has been, so far, I would say, quite successful.

Mr. CONYERS. Now, I want to ask the three gentlemen who are witnesses, what do you see as the major problem in creating an independent laboratory yourselves. Anybody want to give us an idea of what you are up against?

Dr. WEEDN. I will start.

Mr. CONYERS. Please.

Dr. WEEDN. To me, it is fine if a local jurisdiction wants to create an independent lab or not. I think an OFS could result in enhanced recognition support for all the labs, public or the quasi-public kind of operations. I just see that as a separate issue and, really, a states' rights issue for the states to deal with themselves.

I think the Department of Justice is not going to get out of the justice business any time soon. I do not see them likely to give up their FBI, ATF, and DEA crime labs. And therefore, I think there needs to be an Office of Forensic Science within DOJ, regardless of any other, outside forensic science entity.

Mr. CONYERS. Any hope for our new Department of Justice?

Dr. WEEDN. Well, sir, I do not really want to argue this point because I do not have much of an oar in that basket, other than to say the Department of Justice, I believe, really needs an Office of Forensic Science.

Mr. CONYERS. Absolutely. Anybody else want to volunteer?

Mr. GAMETTE. Mr. Conyers, I wish to quote, just a second, from the National Academy of Sciences report from 2009, and it states this: "Ideally, public forensic science laboratories should be independent of, or autonomous within, law enforcement agencies." So, I do not necessarily agree that there is one, and only one, model for a forensic science laboratory in this country. There are many models. Some report directly to Governors. Some report to attorney generals. Mine reports within the State police. I think there are a number of models that could be successful.

This is one model that Houston has chosen, and I will not be critical of that model. It is new. I think they are still learning, and I think there are things to be learned from this model. But I do not advocate for one, specific model because, as Dr. Weedn stated, it is a State and local issue.

Mr. CONYERS. It is the independence that I think you put a lot of emphasis on.

Dr. WEEDN. I would like to make a further comment that, really, one of the important things is the standards that are being developed. Right now, they are being developed at the National Institutes of Standards and Technology, completely outside of the Department of Justice. I think that needs to continue. But that means that all the crime labs, public or otherwise, are really looking to those same standards, and that is being developed outside of DOJ.

Mr. CONYERS. Dr. Baldwin, do you have any comments on this question?

Dr. BALDWIN. No, sir, I do not.

Mr. CONYERS. All right. Finally, my last question is directed, again, to Professor Thompson. Has having an independent lab facilitated any ability for the Houston lab to contribute to the Scientific Research Foundation for Forensic Disciplines?

Mr. GOWDY. You may answer the question.

Ms. THOMPSON. I will answer to the extent that I can. I am not an employee of the lab. So, I am on the board of directors. And I also really can't say what other labs are doing by contrast to what we are doing. But we do have a lot of grant work. I am not sure that it is any different from the kind of research that is, perhaps, being done in other laboratories, so I do not want to make false claims.

Mr. CONYERS. Surely. I understand. Thank you. Chairman Gowdy.

Mr. GOWDY. I thank the gentleman from Michigan. The chair would now recognize the gentleman from Texas, the former United States Attorney, Mr. John Ratcliffe.

Mr. RATCLIFFE. Thank you, Mr. Chairman. I would like to ask that a statement from the National District Attorneys Association on the state of forensic science in the United States dated today, Tuesday, March 28, 2017, be made part of our record for the hearing. Thank you.

Mr. GOWDY. Without objection.

[This statement can be found at the Committee and is available online at: <http://docs.house.gov/meetings/JU/JU08/20170328/105786/HHRG-115-JU08-20170328-SD003.pdf>]

Mr. RATCLIFFE. I want to thank all the witnesses for being here. This is a really important topic and one that interests me as a former Federal prosecutor, like the chairman and a number of the witnesses here.

I want to start on the PCAST report that you mentioned, Dr. Weedn. I had a chance to read that, and it seems to me that maybe the keys of forensic science have been handed over to legal activists. But at the same time, I confess, I know millions of dollars have been spent recently on commissions and committees and standard structures and a host of other initiatives, and yet we find forensic science, frankly, more maligned and disparaged than, perhaps, ever before. So, I guess I want to start and ask your opinion on that report: whether you think it has the scientific rigor, if you will, to defend its foundational validity.

Dr. WEEDN. So first, I will say that is an advisory body with their own opinion. It, of course, flies in the face of decades of admission into courts of law across this country. Of course, there is many thousands of forensic scientists going to court, defending themselves against cross-examination, believing in what they do.

I will point out that the PCAST report talks about a definition of scientific validity that they have no citation or reference for. It is simply their definition. That definition for subjective examinations is largely wrapped around black box studies and known error rates. I will point out to you that, in order to form an error rate, you have to have a method that was based upon a principle and mature enough that you can now assess those error rates. So, it

seems to me not so much a scientific foundation, but later in the process.

But then the other important point is they imply, in the PCAST report, that, without their definition of scientific validity being met, it should not be introduced into court, should not be admissible. I will point out to you that the Daubert v. Merrell Dow Pharmaceutical Company case that was decided by the U.S. Supreme Court actually addressed, what is scientific reliability? And they came up with a set of Daubert factors, of which known error rates was only one.

Mr. RATCLIFFE. Thank you. I want to follow up, because I do not know if it came out of PCAST or if it came out of the National Commission on Forensic Science, but recently, DOJ has made a number of changes in policy that impact what you all do every day. One of those is that, under the prior Attorney General, I know that it was ordered that only accredited crime labs be used by 2020, I think is the year. What impact do you think that is going to have on the role that you all play?

Dr. WEEDN. Well, I will start this answer, but I am sure Mr. Gamette will continue.

So, I think there were several recommendations that were dealt with by Department of Justice, and I believe that they were dealt with in a good fashion. I do not believe that the recommendation for accreditation has a whole lot of teeth to it. The Department of Justice itself is largely accredited. There is only two digital evidence units within the criminal division section that are not accredited.

The A.G. memo specifically accepted digital evidence in that accreditation, and in terms of the 2020, then that suggests that prosecutors should seek accredited labs to admit the evidence in. However, there is not a lot of power there. The U.S. Attorney is largely captive to whatever forensic science testing has been performed.

Mr. RATCLIFFE. Mr. Gamette, do you want to weigh in quickly?

Mr. GAMETTE. Certainly. Thank you. Accreditation is important. We believe in accreditation. The Consortium of Forensic Science Organizations, the members within that, invented a lot of the accreditations for forensic labs. And we support the Attorney General in saying that all Federal labs and Federal prosecutors that are using forensic science at the local level, which we do some Federal work in States, but I would also say that 99 percent of the State laboratories are already accredited.

So, the funding that is going to be needed is in the local and the bigger local laboratories and the smaller local ident units, as we call them. And so, we support that. We support her recommendation. However, the funding is not there, and some of these commissions that have been stood up have not been considering the funding aspects of what they are recommending. We need the funding in order to undergo universal accreditation for forensic science providers in the country.

Mr. RATCLIFFE. Thank you. My time is expiring, but if the chairman will indulge me, I want to follow up, because another change that the Department of Justice announced last September was to direct Federal crime labs to stop or to eliminate using the term "reasonable scientific certainty" from all reports and from all testi-

mony. Now, as someone that tried a number of cases in this area, that is a phrase that I heard a lot and that I used a lot, and I am sure Chairman Gowdy would probably admit that some of his convictions might have been acquittals, had that term not been used. So, I am wondering what you think—

Mr. GOWDY. He does not admit that. He does not admit that.

Mr. RATCLIFFE. So, is there significance to that? Am I just making a bigger deal out of that than I should?

Dr. WEEDN. The Department of Justice did conclude that they should abandon, to the extent possible, the term “reasonable scientific certainty.” There was a recognition, particularly in the civil context, that you could not necessarily abandon it, but in the criminal context, it largely is seen as not having so much meaning. There is not a specific definition. Often, it is used to bolster testimony. I believe that you can say the same thing really, in other words, and I do not believe that it will actually have a whole lot of impact or negative impact in the community.

Mr. RATCLIFFE. Thank you. I yield back.

Mr. GOWDY. The gentleman from Texas yields back the 2 minutes and 32 seconds that he has. The chair would now recognize the gentleman from Michigan.

Mr. CONYERS. Mr. Chairman, I ask unanimous consent to have my opening statement inserted belatedly into the record.

Mr. GOWDY. Without objection.

I thank the gentleman from Michigan. The chair would now recognize the ranking member, Ms. Jackson Lee.

Ms. JACKSON LEE. I thank the chair very much for yielding. And it was interesting to listen to a number of the questions, and particularly the testimony given, or the questions raised by the witnesses, and so I would like to be able to ask each of you questions, though it will not be long enough, but hopefully, I will glean from it some of the intensity of your remarks.

Let me quickly frame for you, again, an international question dealing with an FBI statement in 2004 regarding Brandon Mayfield. And the story, or the facts, are that, after the March terrorist attacks on commuter trains in Madrid, digital images of partial, latent fingerprints obtained from plastic bags that contained detonator caps were submitted by Spanish authorities to the FBI for analysis.

Skipping over the results of an IAFIS search produces a short list of potential matches. A trained fingerprint examiner then takes the short list of possible matches and performs an examination to determine whether the unknown print matches a known print in the database. Using standard protocols and methodologies, it was linked to a Brandon Mayfield.

Soon after the submitted fingerprint was associated with Mr. Mayfield, Spanish authorities alerted the FBI to additional information that cast doubt on the findings. As a result, the FBI sent two fingerprint examiners to Madrid, who compared the image the FBI had been provided to the image Spanish authorities had.

Upon review, it was determined that the FBI identification was based upon an image of substandard quality, which was particularly problematic because of a remarkable number of points of similarity between Mr. Mayfield’s prints and the print details on the

images. However, the ultimate results of that is that the FBI plans to ask an international panel of experts to review their examination of the case, and they proceeded to apologize to Mr. Mayfield and his family for the hardships that this matter had caused.

So, I think I am gleaning from all of your testimony, you are very serious about the crucialness of this science in whatever form it may take for justice, both to solving a crime like a terrorist act in Madrid, Spain, to the heinous acts of sexual assault, which, for many years, we would have angst about DNA kits, which was one of the issues that collapsed the lab in Houston. Just frightening to know the backlog of DNA kits.

So, Dr. Weedn, you sort of indicated that, buried in the DOA, the Office of Investigative and Forensic Sciences, the Office of Justice Program O.I., OJP, and the National Institute of Justice, there lies whatever there is in relationship to the DOJ, aside from the FBI lab at Quantico that all the law enforcement tend to try and use. Is there some other entity in the DOJ?

Dr. WEEDN. Well, yes, ma'am. So, in terms of forensic science, they have operational components in the ATF, the DEA, the FBI, and two small, digital forensics units within—

Ms. JACKSON LEE. Those are like labs.

Dr. WEEDN. The criminal division. Those are the operational labs.

Ms. JACKSON LEE. Right.

Dr. WEEDN. But the OIFS within the NIJ is externally looking. It really responds to the outside community, if you will. That is where the outside community gets some support. But it is small compared to the actual magnitude of the issue, and it does not have a mission of forensic science. That is a secondary issue.

Ms. JACKSON LEE. And that is your complaint? That it does not have a focused mission?

Dr. WEEDN. It is not only that it does not have a focus on forensic science, but it does not have a voice that is loud enough to match its new role in the criminal justice system. So, I really believe that it needs to be raised in profile and not under a social scientist shop that keeps it down.

It has grown, obviously. There has been some support, but it is not near the magnitude necessary. If we look at the opioid crisis, if I understand correctly, the drugs and crime solicitation had two proposals funded, both for just sample preparation. That hardly deals with the national crisis.

Ms. JACKSON LEE. Thank you. Let me proceed with my questioning of Mr. Gamette and the issues that you raised. You seem to suggest that, on the accreditation issue, the question of, what quality of lab should there be? Are you suggesting that it is not worth it to run a high-quality lab? If so, which of the criteria do you think are unnecessary?

Mr. GAMETTE. Congresswoman, I did not intend to convey, in any way, that accreditation is not important. Accreditation is paramount for a laboratory system in any model in this country. We fully support accreditation. My lab has been accredited since 1987. We have been internationally accredited since 2007. We abide by those standards. We live by those standards. We are assessed and

audited to those standards on a daily and, formally, on an annual basis. We believe in accreditation. It makes labs better.

Ms. JACKSON LEE. Well, what is your point about the high cost of accreditation, and what is your response to that? What are you suggesting? Because these labs cost a lot of money.

Mr. GAMETTE. Thank you, Congresswoman. Yes. Absolutely, the cost of accreditation needs to be considered when we are making a recommendation for Federal laboratories or for State and local laboratories that are doing Federal work that may be used in Federal cases or in the trickle-down effect, if we hope to tie grant funding to accreditation or something of that nature. Laboratories need help with the funding, especially the very small, one-, two-person crime laboratories or forensic science providers. They need the help. They need the support. For my laboratory, we can support that through State-level funding. For some, they cannot.

Ms. JACKSON LEE. And when you talk about the labs, are you talking about the labs that deal governmentally or the private labs?

Mr. GAMETTE. I am talking specifically about the government labs.

Ms. JACKSON LEE. That may be small and need support?

Mr. GAMETTE. Correct.

Ms. JACKSON LEE. I will pursue a line of questioning. If I can just finish two questions, Mr. Chairman, I would appreciate it because I want to get to Ms. Thompson, Professor Thompson.

Dr. BALDWIN, I am concerned on the issue that you have raised, I think, in 3-D images, and so I want to try to understand. With the 3-D images, in truth, you cannot really create a representative set of limited data. That is a basic premise of scientific research. Should we not exercise great caution in using any such method in court? The 3-D images?

Mr. GOWDY. Dr. Baldwin, I want you to answer, but I want you to answer as succinctly as you can. We have two more members to go, and then are going to call votes. So, answer it, but just as succinctly as you can.

Dr. BALDWIN. Yes, ma'am, I think we would be very careful using it in court. The intent of using the 3-D imaging in the context I was talking about was providing examiners with feedback on the quality of the material that they were examining, so that they could be cautious about very high quality versus low quality in making their conclusions.

Ms. JACKSON LEE. I ask unanimous consent to put into the record—and as I ask that, if Ms. Thompson can finish and explain her position on the independence of labs. But I ask unanimous consent to place in the record the West Virginia Law Review, by Professor Guerra Thompson, article on the DNA. Can you just quickly explain your position on labs being independent?

Ms. THOMPSON. Yes, ma'am. I think Professor Paul Giannelli, who is a member of the National Forensic Science Commission, has written extensively about his concerns on the interference in scientific research from having so much authority vested within the Department of Justice. It is not an area that I have focused on, but I am familiar with his work, and I cite it in my book.

I will say, in Texas, we have had issues with forensic science, and our legislature has chosen to create a State Texas Forensic Science Commission. It is independent of law enforcement, and this commission now oversees all forensic labs in the State, which have to be accredited. Our lab is accredited to international standards, fully, with the exception of crime scene, and I think what we have seen in Texas is that independence, in all facets of forensic science, is a goal that is a valuable one.

Mr. GOWDY. The gentlelady's time is expired. The chair would now recognize Mr. Chabot.

Mr. CHABOT. Thank you, Mr. Chairman. Mr. Gamette, let me begin with you, if I can. The opioid epidemic is having a devastating impact all over the United States, including in my district, which is Cincinnati and the surrounding area. How is the opioid crisis affecting the forensic science community, and what, if anything, should we, in Congress here, do about that?

Mr. GAMETTE. Thank you so much for the question. The Federal Government's actions in this area have been mainly focused on prevention, interdiction, and therapy. Forensic science has not been considered very heavily in this arena yet. Now, it is a workload issue for the laboratories. I mentioned, in my testimony, about how much the workload has increased for the medical examiners, for the toxicologists that are doing the blood samples, also for the drug chemists that are working in our laboratories.

Now, it is an issue of accreditation for medical examiners. The more cases they work, the more autopsies they work, the more at risk they put their accreditation status, because they can only work so many per year. The instrumentation needs of this country and the validation needs are astonishing, and we could definitely use the support in the laboratories.

Now, the OFS could raise the level of visibility of this issue. It was only recently that the Department of Justice started to talk about the opioid crisis and how it might impact forensic science and that Office of Forensic Science could start that discussion earlier with other emerging issues, because we are in the opioid crisis now. It will not be this crisis next time. It will be something else that this office can be forward-thinking and forward-looking on.

Mr. CHABOT. Thank you very much. Professor Thompson, let me turn to you next, if I can. What are the estimates of how many individuals have been falsely imprisoned because of botched forensic evidence, and what is the average turnaround time to exonerate someone unfairly imprisoned?

Ms. THOMPSON. Those are good questions, and I looked a little bit at that issue before I came. In my book, I take information from the Innocence Project, documenting over 100 people who have been exonerated by means of DNA evidence. Now, that is just one group. There are others. In Houston, just in the last couple of years, there have been a couple of hundred people exonerated of felony drug charges who were convicted before lab tests were even done. Now, those are not forensic errors, but they point at some of the issues. They relate to forensic science, if you will.

But with regard to errors, we know of over 100 that were exonerated through DNA. There are clearly others, I mean, and law pro-

fessors uniformly will talk about how these cases that we discover are, we believe, the tip of the iceberg.

Mr. CHABOT. Okay, thank you very much. And then my next question could be my final question for anybody or multiple people who may want to take it on. I mentioned my district is Cincinnati, and we had a murder case about 20 years ago, and the last name was Culberson. And the victim was a young lady, 22 years old. Her name was Carrie. Her mom's name was Debra. We got to know her very well as a result of this case.

Carrie's boyfriend was ultimately convicted, denied it, and is serving a life sentence, but they never found her body, and there were all kinds of speculation as to what happened. But they never recovered anything. And we worked with the mom and got to know her, as I say, and it was a very sad case.

And one of the things we found, there is an awful lot of runaway kids that may be from Ohio, and they end up in California, or it doesn't necessarily have to be kids, but anybody could be abducted. But the families don't know, ultimately, what ever happened to them. And because of the system, and this is some years ago, we do not necessarily know. I mean, they might find a shin bone in a field in Oregon, or they might find this or that, or they might be sitting, waiting to be examined in somebody's table in the back room somewhere.

We heard all kinds of horror stories about how difficult it is to figure out who they are and match them up with families that are seeking their loved ones. And my question is this: what advances, what progress are we making in identifying human remains and making the families that are trying to find their loved ones aware of it? It looks like, Dr. Weedn, you are the man.

Dr. WEEDN. Yes, there is a lot I could say. But for shortness, I will point out the National Missing and Unidentified Person System. This is called NamUs. It is an entity, an operational program within the Department of Justice and, more specifically, NIJ. Actually, NIJ has sometimes tried to cut it out because it is not a research program, which is their mission. I think an OFS would provide a home for it.

But real quickly, NamUs has a missing persons piece and an unidentified persons piece. This is law enforcement. This is coroners. And that is a software system that allows them to get together across the country. It could be particularly extended to, say, Mexico and Canada, so we can get some people coming across those borders. Thank you.

Mr. CHABOT. Thank you very much. Thank you.

Mr. GOWDY. The gentleman yields back. I would recognize myself for questioning. And I do not want to get all Madisonian on anyone, but as I was listening to you all talk, having been in both State and Federal justice systems, if you were to ask me what the pre-eminent functions of government were in the State of South Carolina, I would tell you, "public safety and education." But it would not dawn on me to expect other States to subsidize South Carolina's State criminal justice system. That should be a priority in South Carolina, just like it should be with children's advocacy centers and domestic violence shelters. Those are almost indigenously State crimes.

So, I do understand why there is a look towards Washington, but most of the crimes that I have heard discussed this morning are either uniquely State, or there would be concurrent jurisdiction in all drug cases, State and Federal. I would like to see some of the pressure brought to bear, and I am sure you all are, in your own jurisdictions. It is one of the reasons we have government, is public safety.

So, let me ask you this, Dr. Baldwin. Most prosecutors are not good with math or science, which is why we go to law school. So, help me understand: is the quarrel with the underlying science, or is the quarrel with the manner in which that science is cross-examined or used? In other words, have you just discounted bite-mark science or tire-tread science, or is the cross-examination just not effective and the manner in which we use those scientific tools suspect?

Dr. BALDWIN. I believe that there needs to be an understanding of the value of a particular examination and the field that you are looking at, whether it is bite marks or it is tire treads; the use for the evidence depends on the case that you are looking at it for, and so, how relevant is it to the question that is trying to be answered? And so, one attempt to that is to understand the statistics for all applications of a particular science, and so we question the overall error rate for a field. That might be a misguided question to say whether it is science or whether it has value in the case.

And so, I think that it is important to provide the best tools, so that the person who is doing an examination, first of all, is answering questions that are relevant to the case at hand and, also, that we understand the value of it to answering the question and how often they can be wrong, so we know how strong their argument would be.

Mr. GOWDY. But part of what you just described is a fact witness, and part of what you just described is an expert witness, and experts get to express opinions.

Dr. BALDWIN. Yes.

Mr. GOWDY. Fact witnesses do not. So, if it is an accepted area that has scientific value, and it has been, whatever the Daubert test is now; I have been gone for so long. Then that person could give an expert opinion; whereas most law enforcement officers cannot give an opinion on anything. So, that is why I asked. But let me move on to this, and I will immunize you if I need to, to ask you this question. But do you know what marijuana smells like?

Dr. BALDWIN. I certainly know from walking through crime labs with a bale.

Mr. GOWDY. Let me ask Mr. Gamette. He is a little younger. And I will offer you immunity, too, if you need it to answer the question. Do you know what marijuana smells like?

Mr. GAMETTE. Chairman, we have marijuana come into the laboratory every day. Bales of marijuana sometimes come into the laboratory every day, and I have definitely smelled the smell of marijuana.

Mr. GOWDY. Right, we will go with that explanation. Let me ask you this. Is there a requirement that you call an expert witness to test marijuana to see that it is marijuana? Can you prove it with circumstantial evidence?

Mr. GAMETTE. Mr. Chairman, if our scientists have marijuana submitted into the laboratory, we will run scientific tests.

Mr. GOWDY. I know you will, but trust me as a prosecutor, there is no requirement. It goes to the weight, and it goes to how juries will view it, but there is no requirement that you prove that it is marijuana. I mean, there is a requirement that the jury conclude it, but you do not have to conduct a test. In a perfect world, of course, every prosecutor wants every stalk of the plant tested. But it is not a requirement once you get to court.

Dr. WEEDN, you and the former U.S. attorney of Texas had a conversation about reasonable degree of scientific certainty. There is another phrase that you hear from time to time in criminal court, which is reasonable doubt. In fact, in some jury instructions, you hear it almost every other sentence. There can be no definition for reasonable doubt in Federal court. So, that is a phrase that juries hear, and no judge ever explains what it means. So, why not be able to use the phrase reasonable degree of scientific certainty, even though it does not have a great explanation or great definition?

Dr. WEEDN. Imagine what the role of the expert is on the stand when that question is asked. It essentially asks that expert, "Well, what is the community consensus?" And sometimes, you really do not know that on very specific issues. If you say, "No," then your whole testimony can be thrown out, even though you really do not know what the community response is. It is a very unfair question to the expert.

Mr. GOWDY. Well, proving reasonable doubt is pretty tough, too, particularly when the jury is never given an explanation of what it means. And some of that, it strikes me, can be done on cross-examination. I mean, we have talked about what good labs would look like, and if they were all accredited, you could do all of that. You are still going to get cross-examined.

Dr. WEEDN. I think I would prefer to be asked the question, "What is in the literature? What do the colleagues that I know ask? What is the basis for my testimony in this way or that?"

Mr. GOWDY. So, to treat you like we would an expert in a civil case? Because those are the kinds of questions we would ask you. We would not ask you to a reasonable degree of scientific certainty in a civil case.

Dr. WEEDN. In a civil case, it comes up particularly in the medical context.

Mr. GOWDY. Right.

Dr. WEEDN. Where it is asked reasonable medical certainty, and that is used to establish an objective standard of care. So, there is a reason for its use in that. It is really different than in the criminal context.

Mr. GOWDY. I am with you. We will finish this conversation later. And the other thing I want us to get to at some point, I went through a long list, forensic pathologists, which are near and dear to homicide prosecutors' hearts, firearms, fingerprint, toxicology, drug analysis, pharmacology. There is a whole body of experts out there called mitigation experts, and I, for the life of me, do not know how you test and probe experts in capital cases whose testimony consists of, "this person had a really bad childhood," and not

linking it to the crime. So, to my friends on the defense side, I understand wanting good science on the prosecutorial side. It would be nice to have a better understanding of what a mitigation expert is on the defense side as well.

With that, and with votes pending, I can tell you, on both sides of the aisle, this is really important. You all are experts, and I will speak for myself. I am not. Ms. Jackson Lee may be; others may be. I am not. So, we benefit from it. And more than anything else, we benefit from a justice system that is not only respected, but worthy of respect.

Ms. JACKSON LEE. Mr. Chairman?

Mr. GOWDY. Yes, ma'am?

Ms. JACKSON LEE. You are so kind with your generosity. May I get one question for Ms. Thompson on the record that I did not, that was the genesis of the lab in Houston, which I think all of us faced, and you, as a prosecutor, faced, and that is the impact of rape kits stagnating in law enforcement offices across the nation, frankly? And that was one of our major issues in Houston. What was the impact, and what have you seen the difference? If the chairman would yield for her to answer that question, I would really appreciate it.

Mr. GOWDY. Certainly.

Ms. THOMPSON. So, in Houston, when we took over, when we created this board of directors for the lab, there were somewhere between 6,600 and, I don't know, maybe eight or 9,000 sexual assault kits that had not been tested. The Texas legislature has now required that all sexual assault kits have to be preserved forever, as far as I know, and that they must all be tested. So, that created a legal obligation for us to test them all. They had not all been requested to be tested, but now they all had to be, by law.

And the city of Houston came up with money that was supported by Federal grant money, as well, to get all of those rape kits tested, and they have been tested by outside, private labs, and there were quite a few arrests that were made as a result of that. So, there was definitely justice delayed, and I believe that there were some additional rapes that occurred in the interim, during that delay. So, it is definitely a concern, like I say. We are very proud that we do not have a sexual assault kit backlog of any kind, and we have a very aggressive definition for backlog.

Ms. JACKSON LEE. Mr. Chairman, I will just end by saying to you, because you made a point. I do not think that we have a disagreement, but in the instance of Houston, the Federal grants were crucial to be a lifeline to get them out of the abyss that they were in and to be able to mount the attack on the backlog. And you can see that was a huge number just for one jurisdiction.

So, I would offer to say that Federal funds can be helpful, and I just listened to Mr. Gamette talk about small labs, and I want to pursue that some other time about the smaller labs. But it has been helpful to getting labs right-side-up, to be able to ensure that the backlog is caught up, and that justice is rendered. So, I thank you, and I thank the witness for her statement.

Mr. GOWDY. Yes, ma'am. We do not have a disagreement at all on that point. I guess my only lamentation was what it took the

Federal Government to reduce the backlog in a State that has the economy and, frankly, the budget surplus of a State like Texas.

Public safety is the preeminent function of government, and we ought to fund that like it is the preeminent function of government. And winning cases this day and age and exonerating the innocent is the highest function of government. We ought to fund it that way. So, you and I are in accord there. I just wish it were done at the level at which the crime took place.

With that, I thank each of you, and members will have an additional 3 days to submit questions or, otherwise, comments for the record.

And with that, we are adjourned. Thank you very much for your expertise.

