

Bad Hair

The Legal Response to Mass Forensic Errors

BRANDON L. GARRETT

The author is the Justice Thurgood Marshall Distinguished Professor of Law at the University of Virginia School of Law.

In 1980, 17-year-old Santae Tribble was on trial for the murder of a 63-year-old man who was robbed and shot on the front porch of his Washington, D.C., home. There was little evidence in the case, aside from the testimony of a police informant, who said Tribble had admitted to his involvement. Tribble had a strong alibi too, with a number of witnesses all testifying that he was away at his mother's in Maryland at the time of the murder. The federal prosecutors, however, had one more piece of evidence. At Tribble's trial, a Federal Bureau of Investigation (FBI) analyst presented a microscopic examination of hairs from the stocking mask the killer had worn and discarded near the crime scene.

The FBI analyst explained that “[o]nly on very rare occasions” had he ever seen hairs of two individuals with the same characteristic. More pointed, he found the hairs with those of Tribble and concluded that “I found that these hairs . . . matched in all microscopic characteristics with the head hair samples submitted to me from Santae Tribble.” In his closing arguments, the prosecutor went further: “There is one chance, perhaps for all we know, in 10 million that it could [be] someone else's hair.” Tribble was sentenced to 20 years to life, and served a 23-year sentence.

In fact, none of the 13 hairs belonged to Tribble. Nine years after Tribble's parole in 2003, DNA tests exonerated him. The hairs were not his, but came from three other individuals—and a dog. The “science” behind the FBI's testimony was so weak,

it couldn't even distinguish human hair from animal hair. The FBI response to this case and the cases of two other men would eventually lead to one of the largest crime lab audits in history.

Systemic Problems

The problem of unsound forensic evidence is not limited to hair analysis. In 2009, a National Academy of Sciences committee tasked by Congress with studying the needs of the forensic science community found not only was there “no scientific support” for the use of hair evidence to identify defendants, but also that the problem is much broader. No forensic discipline, apart from DNA testing, “has been rigorously shown to have the capacity to consistently, and with a high degree of certainty, demonstrate a connection between evidence and a specific individual or source.”

Despite the fact that most forensic evidence is far from conclusive, hundreds, if not thousands, of individuals have been convicted and deprived of their liberty based on assertions by government agents that the evidence is reliable science. I have read trial transcripts of DNA exonerations by the hundreds, and they are chilling. I have found that more often than not, the testimony was exaggerated, overstated, and erroneous. My book, *Convicting the Innocent: Where Criminal Prosecutions Go Wrong*, told the story of the first 250 DNA exonerations in the United

States. Based on updated data and a detailed review of the cases, we learn that more than half of the exonerations involved convictions based on invalid, erroneous, or concealed forensics. Most egregiously, 28 cases involved concealed exculpatory forensics that could have supported a claim of innocence at trial if it had been disclosed. An additional 29 cases involved analysis that was erroneous, including lab errors.

These systemic problems have increasingly confronted lawyers, judges, and policymakers with the question: What should be done when an entire forensic crime laboratory breaks down? Forensic science evidence—from DNA to fingerprints, ballistics, pathology, and chemical assays—is used in hundreds of thousands of criminal investigations each year. There are over 400 public crime labs in the United States, as well as private labs. Without forensics, serious crimes would go unsolved. With modern forensics, innocent people have had their names cleared. And yet, with alarming frequency, groups of forensic analysts or even entire crime labs have had their work come under scrutiny due to flawed or even fraudulent work. The response has sometimes been that this was due to the work of a “bad apple,” and sometimes people did commit terrible mistakes or they falsified evidence. But the reason so many entire crime labs around the country have been audited or even shut down is that sound systems were not in place to prevent forensic errors and even fraud. Despite lessons learned from countless wrongful convictions and lab scandals, those systems still require an overhaul.

The systemic nature of the problem can be appreciated by considering the facts about how this work is done and how law enforcement, prosecutors, and crime labs close ranks when problems emerge. Forensic analysts used by prosecutors typically work in groups at law enforcement crime labs or within police departments with common supervision and training. For instance, from 1985, when the FBI began tracking cases using a computer system, to 1999, FBI agents analyzed and testified in over 3,000 cases using hair comparisons. The FBI also “trained” untold numbers of state and local hair analysts for 25 years.

And yet, despite the high stakes and reason to believe the problem is widespread, government officials have generally resisted large-scale audits of forensic evidence used in criminal trials. Take the case of Jimmy Ray Bromgard, exonerated by DNA testing after serving 15 years in prison in Montana. At his trial, the then director of the Montana State Crime Laboratory compared more than 30 hairs and found that they all “matched” Bromgard’s hairs. He announced his conclusion in court with seemingly powerful but made-up statistics that had no scientific basis. He did the same in other cases. Two more men, Chester Bauer and Paul Kordonowy, were wrongly convicted based on his testimony, only to be exonerated by DNA after years spent in prison. To this day, there has been no examination of the other cases that lab director worked on or supervised in the lab. When

S U A S P O N T E

A Judge Comments

HONS. CHRISTOPHER J. PLOURD AND RON REINSTEIN

Christopher J. Plourd is the presiding judge of the the California Superior Court, County of Imperial; chairman of the Legal Resource Committee of the National Institute of Science and Technology’s Organization of Scientific Area Committees; and a fellow of the American Academy of Forensic Sciences, Jurisprudence Section.

Ron Reinstein served as a judge on the Superior Court of Arizona and is now a judicial consultant to the Arizona Supreme Court, vice chair of the Legal Resource Committee of the National Institute of Science and Technology’s Organization of Scientific Area Committees, and chair of the Arizona Forensic Science Advisory Committee.

In *Bad Hair: The Legal Response to Mass Forensic Errors*, Professor Brandon Garrett begins by describing the infamous Santae Tribble case. Fortunately, we have learned a lot since his conviction in 1980, and not just in microscopic hair analysis. It is clear that many forensic witnesses in years past overstated their conclusions and that prosecutors also overstated the experts’ conclusions in their jury arguments. But one caveat is that, in many instances, that was the “science” as it was known at the time. We have learned much since the advent of DNA analysis about where the system went wrong. In most cases, it is unfair to overgeneralize past forensic science testimony as widespread fraudulent forensic science.

Of course, while some conclusions were overstated, not every defendant was factually innocent. Often other evidence pointed toward guilt. That said, even the overstated conclusions likely would warrant a new trial or, at a minimum, an evidentiary hearing. There is no excuse for withholding evidence or laboratory procedures, especially if the undisclosed evidence or procedure might lead to the exclusion or exoneration of a suspect. Transparency and disclosure of any and all relevant information to the defense and the courts is essential. While Professor Garrett is critical of government agents, including forensic scientists, it also should be noted that defense attorneys, trial judges, and appellate courts at the time often didn’t challenge or critically review forensic evidence and the conclusions flowing from it.

Errors and omissions of the type that occurred in the Tribble case often still happen today. But one very positive step to correct that has been the increasing effort to provide forensic science education for prosecutors, defense attorneys, and judges in the

(Continued on page 35)

Bromgard's lawyers requested an audit, the Montana Supreme Court refused to order one. The Montana attorney general also refused to investigate the lab, saying it would be an "expensive, tedious process."

Problems with this kind of testimony had been known for years, but FBI agents continued to testify in court with an air of certainty about the science of hair analysis. In the mid-1990s, the inspector general created a task force that reviewed FBI hair comparison work "after reports that sloppy work by examiners at the FBI lab was producing unreliable forensic evidence in court trials." Spencer S. Hsu, *Convicted Defendants Left Uninformed of Forensic Flaws Found by Justice Dept.*, WASH. POST, Apr. 16, 2012, www.washingtonpost.com/local/crime/convicted-defendants-left-uninformed-of-forensic-flaws-found-by-justice-dept/2012/04/16/gIQAWTcgMT_story.html. The findings were never released. Only the prosecutors in affected cases were notified—not the defense or the people convicted based on the flawed testimony, like Santae Tribble, who was still in prison at the time. The cases even included death penalty cases. The inspector general who conducted the investigation, Michael Bromwich, was deeply troubled that the Department of Justice (DOJ) and FBI task force "apparently failed to follow through and ensure that defense counsel were notified in every single case."

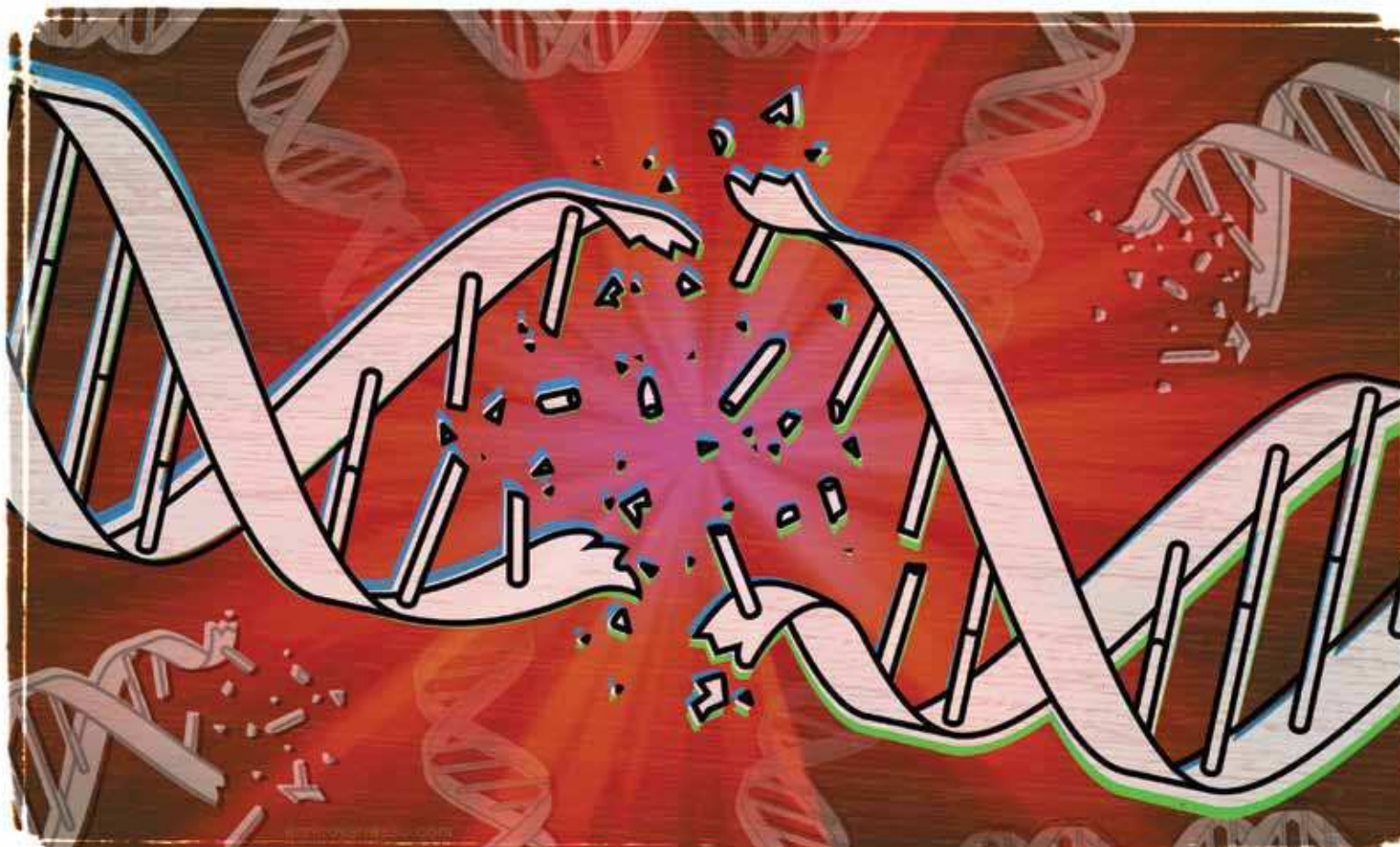
It is important to note this was not the first time the FBI's crime lab had to reckon with claims of junk science. The FBI stopped using "bullet-lead" comparisons in response to

devastating criticism from the scientific community. Similarly, the FBI conducted an inquiry and improved procedures in response to a high-profile error in a fingerprint case, in which agents falsely implicated an Oregon lawyer as a terrorist associated with the Madrid train bombings in 2004.

Problems Finally Come to Light

The lid began to come off due to the tireless work of lawyers at the Public Defender Service for the District of Columbia. They helped free a man named Donald Eugene Gates, who was convicted of murder in Washington, D.C., and spent 28 years in prison. He had been convicted based in part on erroneous hair comparison testimony by an FBI agent. In 2009, he was exonerated by DNA tests that proved his innocence. Gates was not the only one. Lawyers at the D.C. Public Defender Service also helped free Kirk Odom, who served 22 years in prison, and Santae Tribble. In both cases, FBI agents testified that hair analysis linked the men to the crimes. They were wrong.

Initially, the response of the U.S. Attorney and the FBI was to treat this as an isolated bad-apple problem. After the Gates exoneration, when the judge was considering an inquiry into additional cases, the U.S. Attorney's Office told the court that there was "no legal and scientific basis for conducting such a 'massive' audit." Letter from the U.S. Dep't of Justice to Chief Judge Lee F. Satterfield, (Nov. 15, 2010) (on file with author).



Bromgard's lawyers requested an audit, the Montana Supreme Court refused to order one. The Montana attorney general also refused to investigate the lab, saying it would be an "expensive, tedious process."

Problems with this kind of testimony had been known for years, but FBI agents continued to testify in court with an air of certainty about the science of hair analysis. In the mid-1990s, the inspector general created a task force that reviewed FBI hair comparison work "after reports that sloppy work by examiners at the FBI lab was producing unreliable forensic evidence in court trials." Spencer S. Hsu, *Convicted Defendants Left Uninformed of Forensic Flaws Found by Justice Dept.*, WASH. POST, Apr. 16, 2012, www.washingtonpost.com/local/crime/convicted-defendants-left-uninformed-of-forensic-flaws-found-by-justice-dept/2012/04/16/gIQAWTcgMT_story.html. The findings were never released. Only the prosecutors in affected cases were notified—not the defense or the people convicted based on the flawed testimony, like Santae Tribble, who was still in prison at the time. The cases even included death penalty cases. The inspector general who conducted the investigation, Michael Bromwich, was deeply troubled that the Department of Justice (DOJ) and FBI task force "apparently failed to follow through and ensure that defense counsel were notified in every single case."

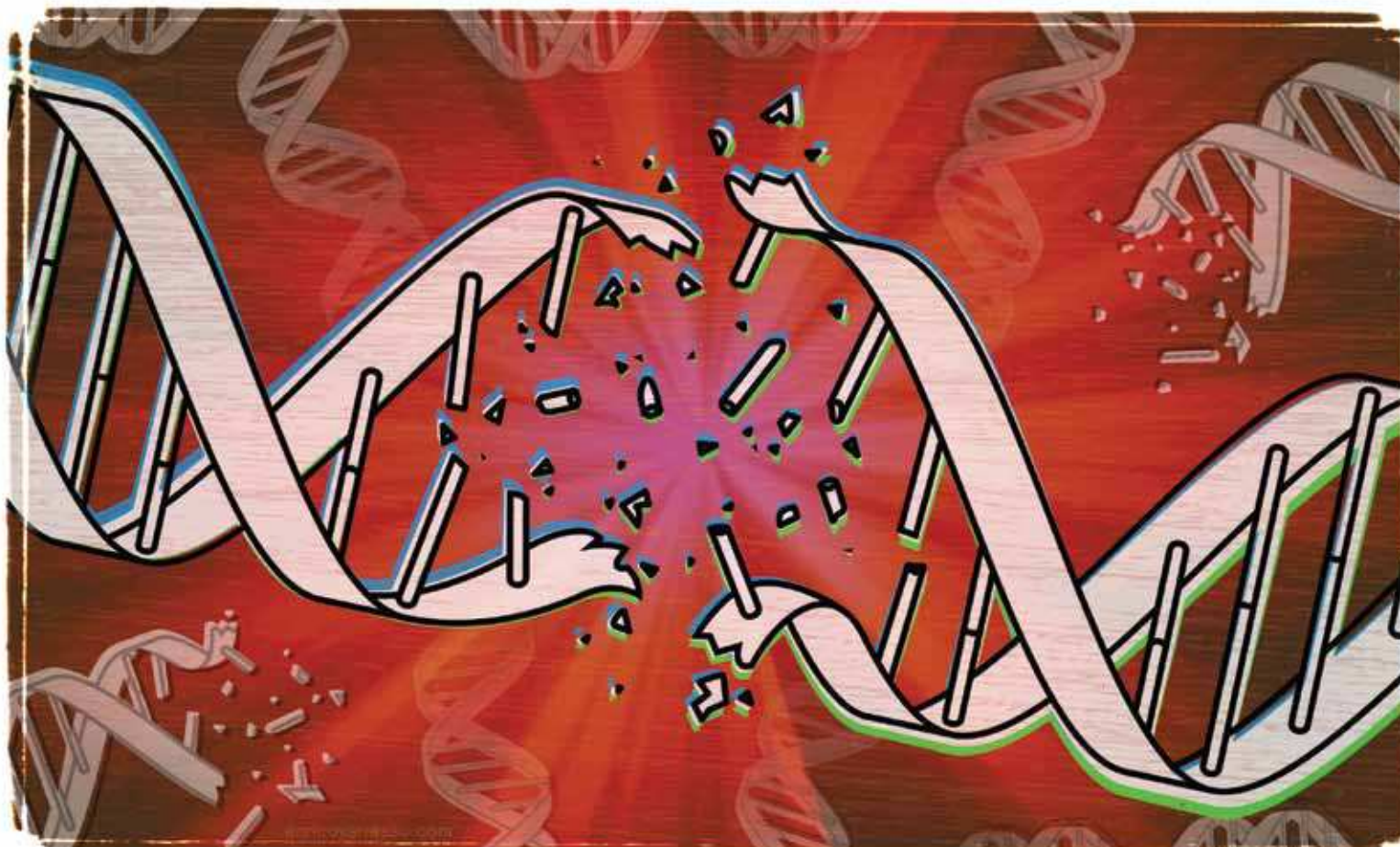
It is important to note this was not the first time the FBI's crime lab had to reckon with claims of junk science. The FBI stopped using "bullet-lead" comparisons in response to

devastating criticism from the scientific community. Similarly, the FBI conducted an inquiry and improved procedures in response to a high-profile error in a fingerprint case, in which agents falsely implicated an Oregon lawyer as a terrorist associated with the Madrid train bombings in 2004.

Problems Finally Come to Light

The lid began to come off due to the tireless work of lawyers at the Public Defender Service for the District of Columbia. They helped free a man named Donald Eugene Gates, who was convicted of murder in Washington, D.C., and spent 28 years in prison. He had been convicted based in part on erroneous hair comparison testimony by an FBI agent. In 2009, he was exonerated by DNA tests that proved his innocence. Gates was not the only one. Lawyers at the D.C. Public Defender Service also helped free Kirk Odom, who served 22 years in prison, and Santae Tribble. In both cases, FBI agents testified that hair analysis linked the men to the crimes. They were wrong.

Initially, the response of the U.S. Attorney and the FBI was to treat this as an isolated bad-apple problem. After the Gates exoneration, when the judge was considering an inquiry into additional cases, the U.S. Attorney's Office told the court that there was "no legal and scientific basis for conducting such a 'massive' audit." Letter from the U.S. Dep't of Justice to Chief Judge Lee F. Satterfield, (Nov. 15, 2010) (on file with author).



Fortunately, the lawyers at the Public Defender Service did not give up. After the two additional DNA exonerations, which the *Washington Post* described in 2012, the U.S. Attorney and the FBI agreed to try to review not just the work of the examiners in those particular cases but also the work of all convictions based on hair analysis. If errors were identified, the DOJ notified the defense attorney at trial, the defendant, and the prosecutor. The government also agreed to provide free DNA testing and waive any procedural barriers to re-litigating these cases in post-conviction proceedings. These steps set an important template for future administrative schemes for the review of forensic errors, whether ordered by a court or an executive agency.

In March 2015, after the FBI analyzed 500 cases, it announced that “at least 90 percent” of trial transcripts contained erroneous statements. The FBI noted that defendants in at least 35 of the cases had received the death penalty, and errors were identified in 33 of those cases. Nine had already been executed and five died of other causes on death row. The FBI also announced that 26 of 28 agents either gave testimony or submitted lab reports with erroneous statements.

In response to the FBI and DOJ audit, Massachusetts, New York, North Carolina, and Texas are beginning to review cases that involved hair analysis. Many more states need to do the same. In Texas, the Forensic Science Commission is also reviewing old cases involving bite mark testimony and statistics used in thousands of old DNA cases. In Massachusetts, courts have ordered a sustained inquiry into the casework of a crime lab chemist who falsified results and engaged in “dry labbing,” or failure to even do the tests. That analyst worked on an estimated 40,000 cases. An internal report noted that the high number of the chemist’s cases alone was troublesome. In response to “egregious misconduct” and “a lapse of widespread magnitude in the criminal justice system,” the Massachusetts Supreme Judicial Court has set up procedures to notify defendants and conduct hearings in those cases. The chief justice of the Superior Court ordered judges to hold special “drug lab sessions”—hundreds of hearings examining cases potentially affected by the misconduct.

Fortunately, the FBI has also expanded its review beyond cases in which trial testimony was given to cases in which there was a guilty plea. Procedures like those adopted in Massachusetts may need to be used by judges to reopen any potentially affected cases.

Not only can lawyers do important work in individual cases by challenging unscientific forensics; they can take on a more systemic role, as the Public Defender Services did in the FBI audit, by asking that judges, prosecutors, and crime labs consider reopening old cases. The FBI audit began with a request by a judge to review certain old cases, but eventually lawyers convinced law enforcement to pursue a far broader inquiry.

Courts and agencies that have addressed these issues have

A Judge Comments

(Continued from page 33)

various forensic science disciplines, as well as explaining the role human factors play in forensic analysis. The Texas Forensic Science Commission and the Arizona Forensic Science Academy, among others, have provided a model for such training. Also, the National Commission on Forensic Science’s subcommittee on training and education has made great efforts to provide an education template for the improvement of the forensic sciences.

Laboratories and forensic scientists are now advocating for and developing improved, consensual standards, guidelines, and forensic practitioner ethics codes. To its credit, the FBI has conducted inquiries in the area of microscopic hair analysis, lead bullet analysis, latent print comparisons, and DNA mixture interpretation—some in conjunction with other stakeholders such as the Innocence Network and the National Association of Criminal Defense Lawyers. As Professor Garrett writes, the FBI’s response and cooperation in the microscopic hair analysis reexamination project provides a road map for future collaborative reviews.

The 2009 National Academy of Sciences report led to formation of the National Commission on Forensic Science (by the Department of Justice) and the Organization of Scientific Area Committees (by the National Institute of Standards and Technology), both of which seek to improve the field of forensic science as well as the intersection of science and law because of the deficiencies found in various reviews. Those reexaminations should not necessarily be limited to cases that went to trial; they should also include those resolved through plea bargains, given the many DNA exonerations of people who pleaded guilty. The form of these reviews should be based on recommendations from multi-stakeholder bodies like the National Commission on Forensic Science. Professor Garrett’s recommendations as to notice, bar participation, post-conviction time bar waivers, and model statutes or regulations are important steps in a collaboration to help ensure justice is served.

Progress to right the wrongs of the criminal justice system has been slow, but it is beginning to speed up, with forensic scientists now getting together to improve their disciplines. Statistical evaluation of forensic methods and technical concepts are being used to better understand how past errors occurred. Fundamental research has identified human factor strategies for maximizing reliability in real-life forensic investigations. Based on our experience, we want to strongly commend forensic scientists for their demonstrated commitment to improve reliability in their field and thereby improve the delivery of justice. ■

had to design corrective mechanisms themselves. We need clear rules and uniform approaches. Agencies, courts, legislatures, and bar associations should draft model regulations and statutes reflecting procedures to be followed when patterns of forensic errors come to light. Routine audit procedures should be established. What ground rules should apply?

Suggested Ground Rules

Statutory triggers. First, there should be statutory mechanisms to order audits of tainted crime lab evidence. Most cases result in plea bargains, and the typical public defender does not have the time or resources to consider these issues in individual cases. Because the problem is a systemic one that affects all cases, the response should be an administrative one. Of course, individual lawyers must be aware of these concerns and use this knowledge when possible to defend the wrongly accused and to bring reliance on deficient scientific evidence to public light.

The “science” behind the FBI’s testimony was so weak, it couldn’t even distinguish human hair from animal hair.

Notice. Any audit must come with due process rights to ensure that the lawyers and clients actually learn that the forensics were botched in their cases. It is not enough to simply send letters to last known addresses of lawyers who handled cases decades before. Many will have retired. Vigorous affirmative efforts should be made to locate lawyers and their clients. Effective process will also require notifying institutional public defenders and involving state and local bar associations in taking on the task of handling cases.

Bar participation. The FBI did something very important in its audit: It partnered with the bar to identify and secure appropriate relief in affected cases. Lawyers with the National Association of Criminal Defense Lawyers (NACDL) and the Innocence Project, together with pro bono lawyers at Winston & Strawn LLP and Michael Bromwich of the Bromwich Group, collaborated with the FBI in its self-examination. The FBI sent letters not just to defense counsel, the client, and the

prosecutor, but also to the NACDL and Innocence Project. This collaborative approach provides an essential template for future audits.

Discovery. Notice should include more than just the information that one’s case is part of an audit. It should include meaningful discovery. Once lawyers know that there was a problem with the forensic evidence in the case, there should be assistance in locating records from the trial, including transcripts that record what the analysts said at trial. Complete lab notes and bench notes that show what the analyst claimed to have done in the laboratory should be preserved and located. Procedures in place at the lab at the time should be disclosed.

Follow-on testing. Available samples should undergo DNA testing, as the FBI did on its hair sample evidence.

Hearings. The court or administrative body should conduct hearings in which the burden is on the state to show that a case was not affected by the pattern of tainted forensic evidence. Courts have handled systemic forensic errors using such a burden-shifting scheme in West Virginia and more recently in Massachusetts. Appointing special masters or convening special sessions in the trial courts, as in Massachusetts, may help to expedite judicial review.

Relief. One obstacle to relief may be post-conviction bars to filing successive or otherwise time-barred petitions. Any potentially applicable procedural bars should be waived, given that, at the time of trial, the defense could not have known that the seemingly confident lab analyst was working in, or even responsible for, a tainted system. Plea bargains also raise special challenges. In Massachusetts, more severe charges and sentences are barred when guilty pleas are reopened. This approach should be replicated.

The daughter of the victim of the murder for which Tribble was wrongly imprisoned wrote: “I lost a father many years ago to murder. Now I learn that the wrong man spent years in prison for the crime. . . . I will do anything to help to see that justice is done.”

Lawyers must take up this challenge in specific cases and in general. Judges need to be far more attentive to these problems when they arise at trial, on appeal, and in post-conviction hearings. Otherwise, they are likely to face audits of thousands of cases down the road. Clearer scientific standards for forensics will help, and a DOJ-established Commission on Forensic Science has taken on that project. Working groups supported by the National Institute on Standards and Technology are also looking into these questions. The legal profession as well as scientists will play a central role in years ahead to demand audits and see that they are conducted carefully. Model rules for reviewing flawed forensics and reopening affected cases, with the full involvement of the bar, should be in place to ensure that justice is done. ■

had to design corrective mechanisms themselves. We need clear rules and uniform approaches. Agencies, courts, legislatures, and bar associations should draft model regulations and statutes reflecting procedures to be followed when patterns of forensic errors come to light. Routine audit procedures should be established. What ground rules should apply?

Suggested Ground Rules

Statutory triggers. First, there should be statutory mechanisms to order audits of tainted crime lab evidence. Most cases result in plea bargains, and the typical public defender does not have the time or resources to consider these issues in individual cases. Because the problem is a systemic one that affects all cases, the response should be an administrative one. Of course, individual lawyers must be aware of these concerns and use this knowledge when possible to defend the wrongly accused and to bring reliance on deficient scientific evidence to public light.

The “science” behind the FBI’s testimony was so weak, it couldn’t even distinguish human hair from animal hair.

Notice. Any audit must come with due process rights to ensure that the lawyers and clients actually learn that the forensics were botched in their cases. It is not enough to simply send letters to last known addresses of lawyers who handled cases decades before. Many will have retired. Vigorous affirmative efforts should be made to locate lawyers and their clients. Effective process will also require notifying institutional public defenders and involving state and local bar associations in taking on the task of handling cases.

Bar participation. The FBI did something very important in its audit: It partnered with the bar to identify and secure appropriate relief in affected cases. Lawyers with the National Association of Criminal Defense Lawyers (NACDL) and the Innocence Project, together with pro bono lawyers at Winston & Strawn LLP and Michael Bromwich of the Bromwich Group, collaborated with the FBI in its self-examination. The FBI sent letters not just to defense counsel, the client, and the

prosecutor, but also to the NACDL and Innocence Project. This collaborative approach provides an essential template for future audits.

Discovery. Notice should include more than just the information that one’s case is part of an audit. It should include meaningful discovery. Once lawyers know that there was a problem with the forensic evidence in the case, there should be assistance in locating records from the trial, including transcripts that record what the analysts said at trial. Complete lab notes and bench notes that show what the analyst claimed to have done in the laboratory should be preserved and located. Procedures in place at the lab at the time should be disclosed.

Follow-on testing. Available samples should undergo DNA testing, as the FBI did on its hair sample evidence.

Hearings. The court or administrative body should conduct hearings in which the burden is on the state to show that a case was not affected by the pattern of tainted forensic evidence. Courts have handled systemic forensic errors using such a burden-shifting scheme in West Virginia and more recently in Massachusetts. Appointing special masters or convening special sessions in the trial courts, as in Massachusetts, may help to expedite judicial review.

Relief. One obstacle to relief may be post-conviction bars to filing successive or otherwise time-barred petitions. Any potentially applicable procedural bars should be waived, given that, at the time of trial, the defense could not have known that the seemingly confident lab analyst was working in, or even responsible for, a tainted system. Plea bargains also raise special challenges. In Massachusetts, more severe charges and sentences are barred when guilty pleas are reopened. This approach should be replicated.

The daughter of the victim of the murder for which Tribble was wrongly imprisoned wrote: “I lost a father many years ago to murder. Now I learn that the wrong man spent years in prison for the crime. . . . I will do anything to help to see that justice is done.”

Lawyers must take up this challenge in specific cases and in general. Judges need to be far more attentive to these problems when they arise at trial, on appeal, and in post-conviction hearings. Otherwise, they are likely to face audits of thousands of cases down the road. Clearer scientific standards for forensics will help, and a DOJ-established Commission on Forensic Science has taken on that project. Working groups supported by the National Institute on Standards and Technology are also looking into these questions. The legal profession as well as scientists will play a central role in years ahead to demand audits and see that they are conducted carefully. Model rules for reviewing flawed forensics and reopening affected cases, with the full involvement of the bar, should be in place to ensure that justice is done. ■