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# Pretrial Discovery of Expert Testimony

Paul C. Giannelli\*

The need for pretrial disclosure is especially important with respect to scientific proof because this type of evidence is virtually impossible to test or rebut at trial without an advance opportunity to examine it carefully.<sup>1</sup> The National Academy of Sciences 1992 DNA report recommended broad discovery: "The prosecutor has a strong responsibility to reveal fully to defense counsel and experts retained by the defendant all material that might be necessary in evaluating the evidence."<sup>2</sup> The report elaborated: "All data and laboratory records generated by analysis of DNA samples should be made freely available to all parties. Such access is essential for evaluating the analysis."<sup>3</sup> As one court put it, "there are no scientific grounds for withholding information in the discovery process."<sup>4</sup>

The President's DNA Initiative noted additional advantages to timely and comprehensive discovery: "Early disclosure can have the following benefits: [1] Avoiding surprise and unnecessary delay, [2] Identifying the

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<sup>1</sup> See FED. R. CRIM. P. 16 (1975) advisory committee's note ("[I]t is difficult to test expert testimony at trial without advance notice and preparation."), reprinted at 62 F.R.D. 312 (1974); Paul C. Giannelli, *Criminal Discovery, Scientific Evidence, and DNA*, 44 VAND. L. REV. 791 (1991).

<sup>2</sup> NATIONAL RESEARCH COUNCIL, DNA TECHNOLOGY IN FORENSIC SCIENCE 146 (1992) [hereinafter NRC I].

<sup>3</sup> NRC I, *supra* note 2, at 23. See also *id.* at 105 (The program should maintain: "Case records—such as notes, worksheets, autoradiographs, and population data-banks—and other data or records that support examiners' conclusions are prepared, retained by the laboratory, and made available for inspection on court order after review of the reasonableness of a request.").

The 1996 National Academies DNA report contains the following statement on discovery: "Certainly, there are no strictly scientific justifications for withholding information in the discovery process, and in Chapter 3 we discussed the importance of full, written documentation of all aspects of DNA laboratory operations. Such documentation would facilitate technical review of laboratory work, both within the laboratory and by outside experts. . . . Our recommendations that all aspects of DNA testing be fully documented is most valuable when this documentation is discoverable in advance of trial." NATIONAL RESEARCH COUNCIL, THE EVALUATION OF FORENSIC DNA EVIDENCE 167-69 (1996) [hereinafter NRC II].

<sup>4</sup> *State v. Tankersley*, 956 P.2d 486, 495 (Ariz. 1998).

need for defense expert services, and [3] Facilitating exoneration of the innocent and encouraging plea negotiations if DNA evidence confirms guilt.”<sup>5</sup>

Traditionally, criminal discovery has been far more limited than civil discovery. In civil cases, discovery includes the automatic identification of experts,<sup>6</sup> comprehensive written reports,<sup>7</sup> and a special deposition provision for experts.<sup>8</sup> Opponents of liberal discovery in criminal cases have argued that discovery will encourage perjury, lead to the intimidation of witnesses, and, due to the Fifth Amendment, be a one-way street.<sup>9</sup> With scientific evidence, however, these traditional arguments lose whatever force they might otherwise have. The first argument fails because “it is virtually impossible for evidence or information of this kind to be distorted or misused because of its advance disclosure.”<sup>10</sup> Also, there is no evidence that experts have been intimidated, probably because the evidence could be retested or another expert could testify about the examination.<sup>11</sup> Finally, the Self-Incrimination Clause as presently interpreted by the Supreme Court presents little impediment to reciprocal prosecution discovery of scientific proof.<sup>12</sup> In addition, due process concerns are eliminated by extensive defense discovery of scientific evidence. As the Supreme Court has noted, due process “speak[s] to the balance of forces between the accused and his accuser.”<sup>13</sup> A study of indigent defense systems by the National Center for State Courts noted that

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<sup>5</sup> President’s DNA Initiative, Principles of Forensic DNA for Officers of the Court (CD).

<sup>6</sup> FED. R. CIV. P. 26(a)(2)(A) (“Disclosure of Expert Testimony . . . [A] party shall disclose to other parties the identity of any person who may be used at trial to present evidence under Rules 702, 703, or 705 of the Federal Rules of Evidence.”).

<sup>7</sup> FED. R. CIV. P. 26(a)(2)(B) (“[T]his disclosure must be accompanied by a written report—prepared and signed by the witness—if the witness is one retained or specially employed to provide expert testimony in the case or one whose duties as the party’s employee regularly involve giving expert testimony.”).

<sup>8</sup> FED. R. CIV. P. 26(b)(4)(A) (“A party may depose any person who has been identified as an expert whose opinions may be presented at trial. If Rule 26(a)(2)(B) requires a report from the expert, the deposition may be conducted only after the report is provided.”).

<sup>9</sup> 2 CHARLES ALAN WRIGHT & ARTHUR R. MILLER, *FEDERAL PRACTICE AND PROCEDURE* § 252, at 36-37 (2d ed. 1982).

<sup>10</sup> Commentary, ABA STANDARDS FOR CRIMINAL JUSTICE RELATING TO DISCOVERY AND PROCEDURE BEFORE TRIAL 66 (Approved Draft 1970).

<sup>11</sup> See 2 WAYNE R. LAFAYE & JEROD H. ISRAEL, *CRIMINAL PROCEDURE* § 19.3, at 490 (1984) (“Once the report is prepared, the scientific expert’s position is not readily influenced, and therefore disclosure presents little danger of prompting perjury or intimidation”). See also *People v. Beeler*, 891 P.2d 153, 168 (Cal. 1995) (en banc) (autopsy report admitted as business record through the testimony of a pathologist who had not performed the autopsy; the pathologist who had conducted the autopsy “had apparently left the coroner’s office under unfavorable conditions”).

<sup>12</sup> See *Williams v. Florida*, 399 U.S. 78 (1970) (Fifth Amendment does not preclude prosecution discovery of evidence the defense intends to offer at trial).

<sup>13</sup> *Wardius v. Oregon*, 412 U.S. 470, 474 (1973). See also *Ross v. Moffitt*, 417 U.S. 600, 609 (1974) (“Due process” emphasizes fairness between the State and

the "greatest disparities occur in the areas of investigators and expert witnesses, with the prosecutors possessing more resources."<sup>14</sup>

There are several aspects to discovery in this context. The first is the identification of all persons who will testify as experts at trial. The second is the disclosure of the substance and basis of their testimony. Finally, the right to retest evidence must be bolstered by requiring the preservation of evidence. Unless the evidence has been preserved, it cannot be retested.

## I. Notice of Expert Testimony

Many jurisdictions, including the federal courts, do not require the prosecution to provide a list of witnesses it intends to call at trial. Nor are discovery depositions generally permitted in criminal cases. Nevertheless, as noted below, discovery of scientific reports is typically authorized, and the existence of such reports provides notice that an expert may be called to testify.

The problem, however, is that the absence of a report does not necessarily mean that an expert will *not* testify. This is so for a rather simple reason: nothing in most discovery rules requires that a report be written, even if a scientific test is performed. As a result, the defendant in *United States v. Shue*<sup>15</sup> was not entitled to the verbal report of an FBI photographic expert who compared pictures of Shue with those of a bank robber. Unknown to the defense, the expert made the comparison the night before he testified. Similarly, a police officer in *United States v. Johnson*<sup>16</sup> testified as an emergency medical technician without notice to the defense. Although the defense argued that the testimony was "highly prejudicial" because it contradicted an important aspect of the defense case, the Eleventh Circuit merely noted that there is no right to a witness list and the federal discovery provision, Rule 16, was not implicated because "no . . . reports were made in this case."

The Wayne Williams prosecution provides another illustration.<sup>17</sup> The trial turned on fiber evidence, an "essential part" of the case, according to the FBI expert who testified for the prosecution.<sup>18</sup> This evidence was critical for two reasons: it connected Williams to the crime scenes of the two homicides for which he was charged, and just as importantly, it connected

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the individual dealing with the State . . .'); *Lassiter v. Department of Social Servs.*, 452 U.S. 18, 28 (1981) (The "adversary system presupposes accurate and just results are most likely to be obtained through the equal contest of opposed interests . . .").

<sup>14</sup> ROGER A. HANSON ET AL., NAT'L CTR. FOR STATE COURTS, INDIGENT DEFENDERS: GET THE JOB DONE AND DONE WELL 100 (1992).

<sup>15</sup> *United States v. Shue* 766 F.2d 1122, 1135 (7th Cir. 1985).

<sup>16</sup> *United States v. Johnson* 713 F.2d 654, 659 (11th Cir. 1983).

<sup>17</sup> *Williams v. State*, 312 S.E.2d 40 (Ga. 1983).

<sup>18</sup> H.A. Deadman, *Fiber Evidence and the Wayne Williams Trial (Part I)*, 53 F.B.I. LAW ENFORCEMENT BULL. 13 (Mar. 1984).

him with ten other murders, evidence of which was introduced as "other acts" proof. One of the three prosecution fiber experts was Barry Gaudette, who worked for the Royal Canadian Mounted Police. He examined fiber and hair samples for eleven days and then testified from personal notes. Gaudette, however, did not prepare a written report, and thus the defense, ruled the Georgia Supreme Court, was not entitled to discovery.<sup>19</sup> The dissent rejoined:

By allowing an expert to forgo delivery of a full written report and to later testify orally where, as here, he had ample time to prepare such a written report and conducted tests too complex to remember unaided, we permit ever more egregious injustice and violation of the intent [of the discovery statute], which is to put into the defendant's hands these reports with sufficient time before trial to enable him to check and challenge their content.<sup>20</sup>

To remedy the problem in the *Shue* and *Johnson* cases, Federal Rule 16(a)(1)(G)<sup>21</sup> was adopted. It requires a summary of expected expert testimony upon request. This provision was intended to "expand federal criminal discovery" in order to "minimize surprise that often results from unexpected expert testimony, reduce the need for continuances, and to provide the opponent with a fair opportunity to test the merit of the expert's testimony through focused cross-examination."<sup>22</sup> The ABA Standards track the federal rule.<sup>23</sup> Although the summary requirement precludes "trial by ambush," most jurisdictions have not adopted it.

## II. Laboratory Reports

The ABA Standards provide for the discovery of scientific reports.<sup>24</sup>

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<sup>19</sup> See also *Law v. State*, 307 S.E.2d 904, 906-07 (Ga. 1983) (discovery statute applies only to written, not oral, reports).

<sup>20</sup> *Williams*, 312 S.E.2d at 100 (Justice Smith).

<sup>21</sup> The rule provides:

(G) Expert witnesses.—At the defendant's request, the government must give to the defendant a written summary of any testimony that the government intends to use under Rules 702, 703, or 705 of the Federal Rules of Evidence during its case-in-chief at trial . . . . The summary provided under this subparagraph must describe the witness's opinions, the bases and reasons for those opinions, and the witness's qualifications.

<sup>22</sup> FED. R. CRIM. P. 16, advisory committee's note, reprinted at 147 F.R.D. at 387.

<sup>23</sup> ABA STANDARDS FOR CRIMINAL JUSTICE, DISCOVERY, Standard 11-2.1(a)(iv) (3d ed. 1996) ("With respect to each expert whom the prosecution intends to call as a witness at trial, the prosecutor should also furnish to the defense a curriculum vitae and a written description of the substance of the proposed testimony of the expert, the expert's opinion, and the underlying basis of that opinion.").

<sup>24</sup> ABA STANDARDS FOR CRIMINAL JUSTICE, DISCOVERY, Standard 11-2.1(a)(iv) (3d ed. 1996) ("Any reports or statements made by experts in connection with the

Virtually all jurisdictions have comparable provisions.<sup>25</sup> For example, Federal Rule 16(a)(1)(F) makes the "results or reports of physical or mental examinations, and of scientific tests or experiments" discoverable. Unfortunately, these rules do not specify the content of the report. In contrast to the Federal Criminal Rules, the Civil Rules require that the report contain:

- (i) a complete statement of all opinions to be expressed and the basis and reasons therefor;
- (ii) the data or other information considered by the witness in forming them;
- (iii) any exhibits to be used as a summary of or support for them;
- (iv) the witness's qualifications, including a list of all publications authored in the preceding 10 years;
- (v) a list of all other cases in which, previous four years, the witness has testified as an expert at trial or by deposition; and
- (vi) a statement of the compensation to be paid for the study and testimony.<sup>26</sup>

The lack of information in crime laboratory reports is not accidental. The *Journal of Forensic Sciences*, the official publication of the American Academy of Forensic Sciences, published a symposium on the ethical responsibilities of forensic scientists in 1989.<sup>27</sup> One article criticized a number of laboratory reporting practices, including (1) "preparation of reports containing minimal information in order not to give the 'other side' ammunition for cross-examination," (2) "reporting of findings without an interpretation on the assumption that if an interpretation is required it can be provided from the witness box," and (3) "[o]mitting some significant point from a report to trap an unsuspecting cross-examiner."<sup>28</sup> These deplorable practices could be curbed, if not eliminated, by requiring comprehensive laboratory reports.<sup>29</sup>

Comprehensive lab reports serve several critical purposes. First, such reports are a quality control mechanism because they ensure that the examiner has followed the prescribed procedure and permit external review.

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case, including results of physical or mental examinations and of scientific tests, experiments, or comparisons."').

<sup>25</sup> See UNIF. R. CRIM. P. 421(a) (Approved Draft 1974) ("expert reports"). See also NATIONAL ADVISORY COMMISSION ON CRIMINAL JUSTICE STANDARDS AND GOALS, REPORT IN COURTS, Standard 4.9(3) (1973).

<sup>26</sup> FED. R. CIV. P. 26(a)(2)(B).

<sup>27</sup> Joseph L. Peterson, *Symposium: Ethical Conflicts in the Forensic Sciences*, 34 J. FORENSIC SCI. 717 (1989).

<sup>28</sup> Douglas M. Lucas, *The Ethical Responsibilities of the Forensic Scientist: Exploring the Limits*, 34 J. FORENSIC SCI. 719, 724 (1989). Lucas served as the Director, The Centre of Forensic Sciences, Ministry of the Solicitor General, Toronto, Ontario.

<sup>29</sup> Laboratory reports have also been fabricated. See *State v. Ruybal*, 408 A.2d 1284, 1285 (Me. 1979) (FBI analyst "reported results of lab tests that he did not in fact conduct."); *State v. DeFronzo*, 394 N.E.2d 1027, 1031 (Ohio C.P. 1978) (Expert represented that certain lab tests were conducted when "no such tests were ever conducted."').

Second, they assist attorneys prepare for trial, enabling them to render effective representation. Third, defense counsel's decision to seek appointment of a defense expert often requires a preliminary evaluation by an expert.<sup>30</sup> An expert might be willing to offer such an assessment, based upon the information contained in such reports, without compensation.

### A. Content of Reports

A laboratory report should be sufficiently comprehensive so that an independent expert can identify the process used and the conclusions reached. The DNA Advisory Board<sup>31</sup> Standards require reports to include (1) a case identifier, (2) a description of evidence examined, (3) a description of the methodology, (4) the locus tested, (5) the results and /or conclusions, (6) an interpretative statement (either quantitative or qualitative), (7) the date issued, (8) the disposition of evidence, and (9) a signature and title, or equivalent identification, of the person(s) accepting responsibility for the content of the report.<sup>32</sup> The American Society of Crime Lab Directors/Laboratory Accreditation Board (ASCLD/LAB) requires laboratory reports to include (1) an "accurate summary of significant material contained in the case notes," (2) "interpretive information as well as examination results wherever possible," and (3) identification of "the analyst(s) and, if appropriate, the testing methodology."<sup>33</sup>

The ABA Standards on DNA Evidence go beyond these measures. Part III of the Standards governs testing of DNA Evidence and includes provi-

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<sup>30</sup> See Paul C. Giannelli, *Ake v. Oklahoma: The Right to Expert Assistance in a Post-Daubert, Post-DNA World*, 89 CORNELL L. REV. 1305, 1312-13 (2004) (discussing the various reports); Judge Jack B. Weinstein, *Science, and the Challenge of Expert Testimony in the Courtroom*, 77 OR. L. REV. 1005, 1008 (1998) ("Courts, as gatekeepers, must be aware of how difficult it can be for some parties—particularly indigent criminal defendants—to obtain an expert to testify. The fact that one side may lack adequate resources with which to fully develop its case is a constant problem.").

<sup>31</sup> The DNA Identification Act of 1994 created a DNA Advisory Board (DAB) to assist in promulgating quality assurance standards. 42 U.S.C. § 14131(b) (2004).

<sup>32</sup> DAB Standard 11.1.2 (1998).

<sup>33</sup> ASCLD *Guidelines for Forensic Laboratory Management Practices*, 14 CRIME LABORATORY DIG. 39, 43 (Apr. 1987). As one scientist has observed: "For a report from a crime laboratory to be deemed competent, I think most scientists would require it to contain a minimum of three elements: (a) a description of the analytical techniques used in the test requested by the government or other party, (b) the quantitative or qualitative results with any appropriate qualifications concerning the degree of certainty surrounding them, and (c) an explanation of any necessary presumptions or inferences that were needed to reach the conclusions." Professor Anna Harrison, Mount Holyoke College, *Symposium on Science and the Rules of Legal Procedure*, 101 F.R.D. 599, 632 (1984).

sions on laboratories and the testing and interpretation of DNA evidence.<sup>34</sup> Adopted in 2006, the Standards recommend: (1) laboratory accreditation every two years, (2) written policies, including protocols for testing and interpreting test results, (3) quality assurance procedures, including audits, proficiency testing, and corrective action protocols, (4) procedures designed to minimize cognitive bias when interpreting test results, and (5) timely reports of credible evidence of lab misconduct or serious negligence.<sup>35</sup> Comprehensive laboratory reports are also recommended.<sup>36</sup> Standard 4-1 requires disclosure of these reports as well as any additional information that could bear on the validity of the results or interpretation. “Problems” during testing, including anything that would be required to be entered into a quality control file (e.g., failure of controls or contamination from someone in the lab or the janitorial staff), should be noted in the report.

The limitations of the technique need to be specified in the report. The National Academy of Sciences report on bullet lead evidence contained the following recommendation: “The conclusions in laboratory reports should be expanded to include the limitations of compositional analysis of bullet lead evidence. In particular, a further explanatory comment should accompany the laboratory conclusions to readily portray the limitations of the evidence.”<sup>37</sup>

## B. Comprehensibility

The purpose of forensic testing is to assist the criminal justice system in fulfilling its function to convict the guilty and exonerate the innocent. Accordingly, participants in the system need to understand the significance of the test results. Overworked prosecutors and defense attorneys lack the time to sort through technical data in order to appreciate the probative value of the lab analysis. An understandable summary would also assist jurors, and examiners are in the best position to provide such a summary.

The National Academy of Sciences report on bullet lead evidence also addressed this issue: “[A] section of the laboratory report translating the technical conclusions into language that a jury could understand would greatly facilitate the proper use of this evidence in the criminal justice system.”<sup>38</sup> Accepting this position, ABA DNA Standard 3.3(c) requires that a section of the laboratory report state the scientific result in language that a nonscientist would understand.

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<sup>34</sup> ABA STANDARDS FOR CRIMINAL JUSTICE, DNA EVIDENCE (2007). The Standards include provisions on: (1) collection, preservation and retention, (2) pretrial disclosure, (3) defense testing and retesting, (4) admissibility of DNA evidence, (5) post-conviction testing, (6) charging persons by DNA profile, and (7) DNA databases. The author served as Reporter for the DNA Standards.

<sup>35</sup> ABA Standard 3.1 (testing laboratories).

<sup>36</sup> ABA Standard 3.3.

<sup>37</sup> NATIONAL RESEARCH COUNCIL, FORENSIC ANALYSIS: WEIGHING BULLET LEAD EVIDENCE 110-11 (2004).

<sup>38</sup> NATIONAL RESEARCH COUNCIL, *supra* note 37, at 110-11.



### C. Testimony Beyond the Report

Experts should generally not testify beyond the scope of the report without issuing a supplemental report. Otherwise, trial by ambush results. *Troedel v. Wainwright*,<sup>39</sup> a capital murder case, illustrates the problem. In that case, a report of a gunshot residue test using neutron activation analysis concluded that swabs "from the hands of Troedel and Hawkins contained antimony and barium in amounts typically found on the hands of a person who has discharged a firearm or has had his hands in close proximity to a discharging firearm." The FBI expert testified in accordance with this report at Hawkins' trial but enhanced his testimony at Troedel's trial, where he testified that "Troedel had fired the murder weapon." During federal habeas proceedings, the expert testified in a deposition that "he could not, from the results of his tests, determine or say to a scientific certainty who had fired the murder weapon" and the "amount of barium and antimony on the hands of Troedel and Hawkins were basically insignificant." The district court found the trial testimony, "at the very least," misleading. Moreover, the expert claimed that the prosecutor had "pushed" him further in Troedel's trial, a claim the prosecutor substantiated.<sup>40</sup> In granting habeas relief, the court found:

In light of this admission, the above testimony received at the evidentiary hearing and the inconsistent positions taken by the prosecution at Hawkins' and Troedel's trials, respectively, the Court concludes that the opinion Troedel had fired the weapon was known by the prosecution not to be based on the results of the neutron activation analysis tests, or on any scientific certainty or even probability. Thus, the subject testimony was not only misleading, but also was used by the State knowing it to be misleading.<sup>41</sup>

The Troedel case is not atypical. Experts are frequently pressured by attorneys to "push the envelope"—not a surprising occurrence in an adversary system. ABA Criminal Justice Standard 3-3.3(a) provides: "A prosecutor who engages an expert for an opinion should respect the independence of the expert and should not seek to dictate the formation of the expert's opinion on the subject. To the extent necessary, the prosecutor should explain to the expert his or her role in the trial as an impartial expert called to aid the fact

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<sup>39</sup> *Troedel v. Wainwright* 667 F. Supp. 1456, 1458 (S.D. Fla. 1986), *aff'd*, 828 F.2d 670 (11th Cir. 1987).

<sup>40</sup> 667 F. Supp. at 1459 ("Next, as Mr. Riley [the expert] candidly admitted in his deposition, he was 'pushed' further in his analysis at Troedel's trial than at Hawkins' trial. Furthermore, at the March 26th evidentiary hearing held before this Court, one of the prosecutors testified that, at Troedel's trial, after Mr. Riley had rendered his opinion which was contained in his written report, the prosecutor *pushed* to 'see if more could have been gotten out of this witness.' When questioned why, in the Hawkins trial, he did not use Mr. Riley's opinion that Troedel had fired the weapon, the prosecutor responded he did not know why.").

<sup>41</sup> 667 F. Supp. at 1459-60.

finders . . . .”<sup>42</sup> The commentary to this Standard states: “Statements made by physicians, psychiatrists, and other experts about their experiences as witnesses in criminal cases indicate the need for circumspection on the part of prosecutors who engage experts. Nothing should be done by the prosecutor to cast suspicion on the process of justice by suggesting that the expert color an opinion to favor the interests of the prosecutor.”<sup>43</sup>

Ethical standards are fine but in this context requiring comprehensive lab reports may be more effective. An express statement of the limitations of the technique in the report, and a requirement that an expert not testify beyond the conclusions stated in the report, would protect experts from overreaching by attorneys. A supplemental report can be issued if new information is received.

### III. Bench Notes

Timothy Spencer was the first person executed based on DNA evidence.<sup>44</sup> Yet, when the defense sought discovery of the prosecution expert’s “work notes,” which formed the basis of his report, the motion was denied, and the Virginia Supreme Court upheld this ruling.<sup>45</sup> Why?

Access to bench notes is critical. One of the most notorious cases involved Fred Zain, the Chief Serologist in the West Virginia State Police Crime Laboratory, who falsified test results in as many as 134 cases from 1979 to 1989.<sup>46</sup> A judicial report concluded:

The acts of misconduct on the part of Zain included (1) overstating the strength of results; (2) overstating the frequency of genetic matches on individual pieces of evidence; (3) misreporting the frequency of genetic matches on multiple pieces of evidence; (4) reporting that multiple items of evidence had been tested, when only a single item had been tested; (5) reporting inconclusive results as conclusive; (6) repeatedly altering laboratory records; (7) grouping results to create the erroneous impression that genetic markers had been obtained from all samples tested; (8) failing to report conflicting results; (9) failing to conduct or to report conducting additional testing to resolve conflicting results; (10) implying a match with a suspect when testing supported only a match with the victim; and (11) reporting scientifically impossible or improbable results.<sup>47</sup>

A forensic scientist would later comment: “It is also clear that in case after case, defense counsel failed to review the case notes of the prosecution’s fo-

<sup>42</sup> A comparable Standard applies to defense counsel. ABA Standard 4-4.4(a).

<sup>43</sup> Commentary, ABA STANDARDS FOR CRIMINAL JUSTICE, PROSECUTION AND DEFENSE FUNCTION 59 (3d ed. 1993).

<sup>44</sup> *Murderer Put to Death in Virginia: First U.S. Execution Based on DNA Tests*, N.Y. TIMES, Apr. 28, 1994.

<sup>45</sup> *Commonwealth v. Spencer*, 384 S.E.2d 785, 791 (Va. 1989).

<sup>46</sup> See Paul C. Giannelli, *Wrongful Convictions and Forensic Science: The Need to Regulate Crime Labs*, 86 N.C. L. REV. 163, 172-74 (2007).

<sup>47</sup> *In re Investigation of the W. Va. State Police Crime Lab., Serology Div.*, 438 S.E.2d 501, 503 (W. Va. 1993) (quoting report).

rensic serologists. Even a layperson would have seen that Fred Zain's written reports and sworn testimony were contradicted by his case notes."<sup>48</sup>

Zain was not alone. John Willis was convicted of rape in 1992, despite his protests of innocence. At his trial, Dr. Pam Fish, a serologist in the Chicago Crime Lab, testified that her tests were "inconclusive"—i.e., that they had neither included nor excluded Willis as the source of semen. Willis, dubbed the "beauty shop rapist," was convicted and sentenced to 100 years of imprisonment. Seven years later, he was exonerated by DNA testing. At that time, Fish's lab notes surfaced, indicating that Willis's blood type (type A) excluded him as the source of the semen (type B). Fish had failed to acknowledge this "problem" during her testimony. "Fish's misleading testimony in the Willis case, which led to the conviction of an innocent man and allowed a predator to continue roaming the streets, shows why the state should have turned over all of Fish's laboratory notes and data, rather than merely presenting her final report."<sup>49</sup>

Bench notes have been cited in other crime lab scandals. The 1997 I.G. Report on the FBI Laboratory's explosive unit identified a somewhat different issue—inadequate bench notes: "The Rudolph files and some of Martz's work underscore the importance of case files containing all the documentation necessary for another appropriately qualified examiner to be able to understand and replicate the examiners's data and analysis. We encountered the problem of incomplete or missing documentation in many case files."<sup>50</sup>

Similarly, the investigation into the Houston Crime Lab fiasco found the same deficiency: "Among other problems it identified, the 2002 [state] audit found that no such written procedures [for case notes and lab reports] existed and identified numerous deficiencies in the documentation contained in the lab reports."<sup>51</sup>

### A. *Delaware v. Fensterer*

In one Supreme Court case, *Delaware v. Fensterer*,<sup>52</sup> an FBI analyst

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<sup>48</sup> Walter F. Rowe, *Commentary*, in EDWARD CONNORS ET AL., CONVICTED BY JURIES, EXONERATED BY SCIENCE: CASE STUDIES IN THE USE OF DNA EVIDENCE TO ESTABLISH INNOCENCE AFTER TRIAL xvii-xviii (1996).

<sup>49</sup> BARRY SCHECK ET AL., ACTUAL INNOCENCE: FIVE DAYS TO EXECUTION AND OTHER DISPATCHES FROM THE WRONGLY CONVICTED 125 (2000). See also Giannelli, *supra* note 46, at 185-87 (discussing Willis case).

<sup>50</sup> OFFICE OF INSPECTOR GENERAL, U.S. DEP'T OF JUSTICE, THE FBI LABORATORY: AN INVESTIGATION INTO LABORATORY PRACTICES AND ALLEGED MISCONDUCT IN EXPLOSIVES-RELATED AND OTHER CASES (1997) (recommending the preparation of adequate case files to support reports). See also Giannelli, *supra* note 46, at 195-96 (discussing report).

<sup>51</sup> THIRD REPORT OF THE INDEPENDENT INVESTIGATOR FOR THE HOUSTON POLICE DEP'T CRIME LABORATORY AND PROPERTY ROOM 28 (June 30, 2005). See also Giannelli, *supra* note 46, at 187-91 (discussing Houston crime lab).

<sup>52</sup> *Delaware v. Fensterer*, 474 U.S. 15 (1985) (right of confrontation satisfied even if witness claims lack of memory on cross-examination).

testified that he could not remember which of three methods he had used to determine that hair found at a murder scene had been forcibly removed, a significant issue in the case. He apparently neglected to record this critical information. Yet, the Supreme Court declined to find a confrontation violation in this situation. On remand, however, the Delaware Supreme Court held the opinion inadmissible, but on evidentiary, rather than constitutional, grounds. According to that court: "While a witness's mere lack of memory as to a particular fact may go only to the weight of that evidence, an expert witness's inability to establish a sufficient basis for his opinion clearly renders the opinion inadmissible under D.R.E. 705."<sup>53</sup>

But the question remains: How could an expert who conducted a forensic examination fail to make a record? As one judge correctly observed:

It is an insult to intelligent people to say that a scientific test was conducted from which absolutely no notes or records survive. Unless of course the omission was deliberate. A basic principle of scientific testing is that careful records of test procedure and results are to be scrupulously maintained. A scientific test without an accompanying report of the testing environment, number of trials, raw result and analyzed data is in reality no test at all.<sup>54</sup>

The issue resurfaced in a recent cartridge identification case, *United States v. Monteiro*.<sup>55</sup> Because the expert did not make any sketches or take any photographs, adequate documentation was lacking. The court wrote: "Until the basis for the identification is described in such a way that the procedure performed by Sgt. Weddleton is reproducible and verifiable, it is inadmissible under Rule 702 [as expert testimony]."

## B. DNA Cases

The requirements mandated in DNA profiling provide a model. DNA Advisory Board Standard 11.1 (1998) requires laboratories to adopt and follow written procedures for taking and maintaining case notes to support the conclusions drawn in laboratory reports. The ABA DNA Standards also recommend that laboratory protocols and procedures be publicly available and that each step in the testing of DNA evidence and in the interpretation of the test results be recorded contemporaneously in case notes.<sup>56</sup> The Standards also require disclosure of all case notes, raw electronic data, and lab reports.<sup>57</sup> These requirements should not be limited to DNA cases.

## IV. Other Information

In addition to lab reports and bench notes, other information is often

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<sup>53</sup> Fensterer v. State, 509 A.2d 1106, 1109-10 (Del. 1986).

<sup>54</sup> Law v. State, 307 S.E.2d 904, 908 (Ga. 1983) (Smith, J., dissenting).

<sup>55</sup> *United States v. Monteiro* 407 F. Supp. 2d 351, 374 (D. Mass. 2006).

<sup>56</sup> See ABA DNA Standard 3.2 (Testing and interpretation of DNA evidence).

<sup>57</sup> See ABA DNA Standard 4.1 (Disclosure).

needed to prepare for trial. Early DNA cases recognized the need for extensive pretrial discovery beyond laboratory reports. In *United States v. Yee*,<sup>58</sup> the district court required disclosure of matching criteria, environmental insult studies, population data, and proficiency test results. *People v. Castro*,<sup>59</sup> *State v. Charles*,<sup>60</sup> and *Ex parte Perry*<sup>61</sup> also recognized the need for extensive discovery. Similarly, a number of state DNA admissibility statutes require pretrial notice and discovery.<sup>62</sup> Illinois Supreme Court Rule 417

<sup>58</sup> *United States v. Yee*, 129 F.R.D. 629, 635 (N.D. Ohio 1990).

<sup>59</sup> *People v. Castro* 545 N.Y.S.2d 985, 999 (Sup. Ct. 1989) (“1) Copies of autorads, with the opportunity to examine the originals. 2) Copies of laboratory books. 3) Copies of quality control tests run on material utilized. 4) Copies of reports by the testing laboratory issued to proponent. 5) A written report by the testing laboratory setting forth the method used to declare a match or non-match, with actual size measurements, and mean or average size measurement, if applicable, together with standard deviation used. 6) A statement by the testing lab, setting forth the method used to calculate the allele frequency in the relevant population. 7) A copy of the data pool for each loci examined. 8) A certification by the testing lab that the same rule used to declare a match was used to determine the allele frequency in the population. 9) A statement setting forth observed contaminants, the reasons therefore, and tests performed to determine the origin and the results thereof. 10) If the sample is degraded, a statement setting forth the tests performed and the results thereof. 11) A statement setting forth any other observed defects or laboratory errors, the reasons therefore and the results thereof. 12) Chain of custody documents.”).

<sup>60</sup> *State v. Charles*, 617 So. 2d 895, 896 (La. 1993) (“(a) The computations which were performed in order to calculate the probability of a match; (b) The evidence on which the state’s laboratory relied to reach the following two assumptions (i) that the genotypes in each system are in Hardy-Weinberg equilibrium proportions; and (ii) all four systems are independently distributed in the populations; (c) How the tables used by the laboratory were obtained in order to reach its conclusion that the genotypes in each system are in Hardy-Weinberg equilibrium proportions and all four systems are independently distributed in the population; (d) How many individuals were used to calculate the frequencies in each column of the tables and how those individuals can be characterized demographically; and (e) What evidence was used to reach a conclusion that a bin width of 1/8% is reasonable including a scientific explanation of just what was analyzed and how it was analyzed.”).

<sup>61</sup> 586 So. 2d 242, 255 (Ala. 1991).

<sup>62</sup> *E.g.*, CONN. GEN. STAT. § 54-86k(c) (1999) (21 day notice); MD. CTS. & PROC. CODE § 10-915(C) (1998) (“In any criminal proceeding, the evidence of a DNA profile is admissible to prove or disprove the identity of any person, if the party seeking to introduce the evidence of a DNA profile: (1) Notifies in writing the other party or parties by mail at least 45 days before any criminal proceeding; and (2) Provides, if applicable and requested in writing, the other party or parties at least 30 days before any criminal proceeding with: (i) First generation film copy or suitable reproductions of autoradiographs, dot blots, slot blots, silver stained gels, test strips, control strips, and any other results generated in the course of the analysis; (ii) Copies of laboratory notes generated in connection with the analysis, including chain of custody documents, sizing and hybridization information, statistical calculations,

specifically provides for discovery of DNA materials in all felony prosecutions, as well as in post-trial and post-conviction proceedings, including:

- (I) Copies of the case file including all reports, memoranda, notes, phone logs, contamination records, and data relating to the testing performed in the case.
- (ii) Copies of any autoradiographs, lumigraphs, DQ Alpha Polymarker strips, PCR gel photographs and electropherograms, tabular data, electronic files and other data needed for full evaluation of DNA profiles produced and an opportunity to examine the originals, if requested.
- (iii) Copies of any records reflecting compliance with quality control guidelines or standards employed during the testing process utilized in the case.
- (iv) Copies of DNA laboratory procedure manuals, DNA testing protocols, DNA quality assurance guidelines or standards, and DNA validation studies.
- (v) Proficiency testing results, proof of continuing professional education, current curriculum vitae and job description for examiners, or analysts and technicians involved in the testing and analysis of DNA evidence in the case.
- (vi) Reports explaining any discrepancies in the testing, observed defects or laboratory errors in the particular case, as well as the reasons for those and the effects thereof.
- (vii) Copies of all chain of custody documents for each item of evidence subjected to DNA testing.
- (viii) A statement by the testing laboratory setting forth the method used to calculate the statistical probabilities in the case.
- (ix) Copies of the allele frequencies or database for each locus examined.
- (x) A list of all commercial or in-house software programs used in the DNA testing, including the name of the software program, manufacturer and version used in the case.
- (xi) Copies of all DNA laboratory audits relating to the laboratory performing the particular tests.<sup>63</sup>

A number of specific documents are discussed below, e.g., case files, proficiency test results, lab protocols, and calibration records.

### A. Case Files

The DNA Advisory Board Standards require laboratories to maintain a case record in which all documentation generated by examiners relating to the case is retained.<sup>64</sup> Typically, the case file will include electropherograms, chain of custody documents, case correspondence, lab notes, etc. ASCLD/LAB requires sufficient documentation so that an independent expert could evaluate whether the analysis was properly performed. There are still significant interpretative issues in DNA profiling. As several commentators have noted: "The complexity of short tandem repeat (STR) testing makes it dif-

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and worksheets; (iii) Laboratory protocols and procedures utilized in the analysis; (iv) The identification of each genetic locus analyzed; and (v) A statement setting forth the genotype data and the profile frequencies for the databases utilized."); VA. CODE ANN. § 19.2-270.5 (2002) (21 day notice).

<sup>63</sup> ILL. SUP. CT. R. 417(b).

<sup>64</sup> DAB Standard 11.1.

ficult if not impossible for a lawyer to evaluate the evidence without expert assistance. Defense lawyers generally need expert assistance to look behind the laboratory report and evaluate whether its conclusions are fully supported by the underlying data.”<sup>65</sup> In particular, electropherograms need to be reviewed.

## B. Proficiency Tests

The testifying examiner’s record of proficiency testing should also be disclosed.<sup>66</sup> As the Maryland Court of Appeals commented: The expert’s “qualifications, including her record in proficiency tests, also are relevant to the weight the fact-finder might give the test results based on its assessment of her competency.”<sup>67</sup>

## C. Laboratory Protocols

ABA DNA Standard 3.1 provides for public access to lab policy and procedures, including written protocols. To the extent that such material is not publicly available, it is discoverable. As one court has observed: “Given that no outsider may observe testing within the laboratory, it is understandable that the defense would seek to obtain the lab’s standard operating procedures in order to evaluate the sufficiency of those procedures and determine if they were followed in the tests actually performed in a given case.”<sup>68</sup>

## D. Calibration Records

Maintenance and calibration records for any instrumentation used in testing should also be subject to discovery. According to one court, “the defendant was entitled to challenge the accuracy of any test and to understand exactly how the test was performed. He was not required to demonstrate,

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<sup>65</sup> William C. Thompson et al., *Part II: Evaluating Forensic DNA Evidence*, CHAMPION 24, 26 (May 2003).

<sup>66</sup> See *State v. Proctor*, 559 S.E.2d 318, 322-23 (S.C. Ct. App. 2001) (“The proficiency test results could very well be material to the preparation of Proctor’s defense. All proficiency test results of the DNA analyst involved in the case must be produced. Defense counsel has the right to cross examine the DNA analyst regarding his or her performance on proficiency tests. A failing grade by the DNA analyst on his or her proficiency tests is clearly relevant in the judge’s evaluation of the expert’s competency and most probably reflects negatively on the reliability of the DNA evidence introduced at trial. The trial court abused its discretion in denying discovery of the proficiency test results pursuant to Rule 5.”).

<sup>67</sup> *Cole v. State*, 835 A.2d 600, 610 (Md. 2003).

<sup>68</sup> 835 A.2d at 609. See also *State v. Dunn*, 571 S.E.2d 650 (N.C. Ct. App. 2002) (“laboratory protocols, incidences of false positive results, quality control and quality assurance, and proficiency tests” discoverable).

before even gaining access to the desired information and documents, that the test results were inaccurate or the procedures faulty.”<sup>69</sup>

## V. Preservation of Evidence

ABA Discovery Standards provide for the right to retest evidence in the government’s possession,<sup>70</sup> and ABA Resolution No. 115 reads: “All biological evidence should be made available to defendants and convicted persons upon request . . . .”<sup>71</sup> In addition, the 1996 National Academies Report noted that “[a] wrongly accused person’s best insurance against the possibility of being falsely incriminated is the opportunity to have the testing repeated.”<sup>72</sup> Many discovery rules explicitly provide for defense retesting or have been so construed,<sup>73</sup> and a number of cases have recognized a constitutional right to retest evidence.<sup>74</sup>

Yet, the right to retest depends on the preservation of the evidence. In the 1970s, courts began to extend the *Brady* doctrine to the preservation of evidence.<sup>75</sup> The right of preservation was extensively litigated in scientific evidence cases. Defendants successfully argued that this right had been violated by the prosecution’s failure to preserve drugs, bullets, blood, urine,

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<sup>69</sup> 835 A.2d at 613.

<sup>70</sup> ABA STANDARDS FOR CRIMINAL JUSTICE, DISCOVERY, Standard 11-3.2(b) (3d ed. 1996) (“Upon motion, either party should be permitted to conduct evaluations or tests of physical evidence in the possession or control of the other party which is subject to disclosure. The motion should specify the nature of the test or evaluation to be conducted, the names and qualifications of the experts designated to conduct evaluations or tests, and the material upon which such tests will be conducted.”).

<sup>71</sup> ABA House of Delegates, 2000 Annual Meeting, Report No. 115.

<sup>72</sup> NRC II, *supra* note 3, at 87.

<sup>73</sup> See 1 PAUL C. GIANNELLI & EDWARD J. IMWINKELRIED, SCIENTIFIC EVIDENCE ch. 3 (4th ed. 2007) (listing statutes and rules). The federal courts have read this right into the federal discovery rule: “In cases involving a controlled substance, courts have held a concomitant part of the examination or inspection to be the right of the accused to have an independent chemical analysis performed on the seized substance.” *United States v. Gaultney*, 606 F.2d 540, 545 (5th Cir. 1979), *rev’d on other grounds sub nom. Steagald v. United States*, 451 U.S. 204 (1981).

<sup>74</sup> “Fundamental fairness is violated when a criminal defendant . . . is denied the opportunity to have an expert of his choosing, bound by appropriate safeguards imposed by the Court, examine a piece of critical evidence whose nature is subject to varying expert opinion.” *Barnard v. Henderson*, 514 F.2d 744, 746 (5th Cir. 1975).

<sup>75</sup> See *Brady v. Maryland*, 373 U.S. 83 (1963) (recognizing a due process right to exculpatory evidence upon request). In addition to due process, the right of preservation may be supported by the compulsory process and right of confrontation guarantees.



and trace metal detection results, as well as physical evidence of arson, rape, and homicide.<sup>76</sup> Nevertheless, the scope of the right remained uncertain.

In *Arizona v. Youngblood*,<sup>77</sup> the Supreme Court addressed the issue in a case involving the failure to preserve semen in a sexual assault case. While bad faith is not a requirement in the *Brady* suppression cases, the Supreme Court nevertheless ruled it determinative in a failure to preserve situation. The Court wrote: "The failure of the police to refrigerate the clothing and to perform tests on the semen samples can at worst be described as negligent." Thus, *Youngblood*'s claim was rejected, even though the evidence appeared critical.

## A. State Courts

Some courts have found "bad faith" destruction, while numerous courts have not. This is not surprising since the standard is an extremely difficult one to satisfy. Indeed, the *Youngblood* approach was so out-of-line with notions of basic fairness that an overwhelming majority of state courts rejected it as a matter of state law. As one court observed: "Apparently only Arizona and California . . . have concluded that their state charters offer the same limited degree of protection as the federal constitution."<sup>78</sup> That court went on to reject *Youngblood* as a matter of state constitutional law: "Like our sister states, we conclude that the good or bad faith of the police in failing to preserve potentially useful evidence [semen stains that could have been tested for DNA] cannot be dispositive of whether a criminal defendant has been deprived of due process of law. Accordingly, we, too, reject the litmus test of bad faith on the part of the police, which the United States Supreme Court adopted under the federal constitution in *Youngblood*."<sup>79</sup>

Courts rejecting *Youngblood* have adopted several approaches. The Alabama Supreme Court, for instance, has recognized an exception to the bad faith test where the evidence is so critical to the defense as to make a crimi-

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<sup>76</sup> See 1 GIANNELLI & IMWINKELRIED, *supra* note 73, § 3-13.

<sup>77</sup> *Arizona v. Youngblood*, 488 U.S. 51 (1988).

<sup>78</sup> *State v. Morales*, 657 A.2d 585, 594 n.20 (Conn. 1995).

<sup>79</sup> See also *Thorne v. Department of Public Safety*, 774 P.2d 1326, 1331 n.9 (Alaska 1989) ("We have construed the Alaska Constitution's Due Process Clause to not require a showing of bad faith."); *State v. Matafeo*, 787 P.2d 671, 673 (Haw. 1990) (bad faith test too restrictive because it precludes courts "in cases where no bad faith is shown, from inquiring into the favorableness of the evidence or the prejudice suffered by the defendant as a result of its loss"); *Commonwealth v. Henderson*, 582 N.E.2d 496, 497 (Mass. 1991) ("The rule under the due process provisions of the Massachusetts Constitution is stricter than that stated in the *Youngblood* opinion."); *State v. Osakalumi*, 461 S.E.2d 504, 512 (W. Va. 1995) ("As a matter of state constitutional law, we find that fundamental fairness requires this Court to evaluate the State's failure to preserve potentially exculpatory evidence in the context of the entire record."); *State v. Delisle*, 648 A.2d 632, 643 (Vt. 1994) (*Youngblood* decision "too narrow because it limits due process violations to only those cases in which a defendant can demonstrate bad faith, even though the negligent loss of evidence may critically prejudice a defendant").

nal trial without it “‘fundamentally unfair.’”<sup>80</sup> The court applied this exception in a prosecution for toxic waste dumping where the sole evidence—the samples tested—was not preserved. Similarly, the Delaware Supreme Court rejected *Youngblood* and set forth a three-pronged analysis: (1) the degree of negligence or bad faith involved, (2) the importance of the missing evidence, considering the probative value and reliability of secondary or substitute evidence that remains available, and (3) the sufficiency of the other evidence used at trial to sustain the conviction.<sup>81</sup> According to that court, “We remain convinced that fundamental fairness, as an element of due process, requires the State’s failure to preserve evidence that could be favorable to the defendant ‘[to] be evaluated in the context of the entire record.’ . . . When evidence has not been preserved, the conduct of the State’s agents is a relevant consideration, but it is not determinative.”

## B.Exoneration

The *Youngblood* test provides little incentive for police departments to adopt standard operating procedures that ensure the proper collection and preservation of evidence—procedures that in all likelihood would benefit the prosecution more in the long run. After having spent nine years in prison, Larry Youngblood was exonerated through DNA testing. Dr. Edward Blake, a DNA scientist, told a reporter:

We now have before us a flawed legal precedent that stands on the shoulders of an innocent man . . . For those organizations that are poorly run or mismanaged or don’t give a damn, . . . the Youngblood case was a license to let down their guard and be lazy. The effect that had was generally to lower the standards of evidence collection.<sup>82</sup>

At this late date, the lack of procedures to preserve evidence should be considered “bad faith” under the *Youngblood* decision.

## Conclusion

Pretrial discovery is critical when experts testify in criminal prosecutions. The Minnesota Supreme Court put it succinctly: “[F]air trial and due process rights are implicated when data relied upon by a laboratory in performing tests are not available to the opposing party for review and cross examination.”<sup>83</sup>

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<sup>80</sup> *Ex parte Gingo*, 605 So. 2d 1237, 1241 (Ala. 1992).

<sup>81</sup> *Hammond v. State*, 569 A.2d 81, 87 (Del. 1989) (citation omitted).

<sup>82</sup> Barbara Whitaker, *DNA Frees Inmate Years After Justices Rejected Plea*, N.Y. TIMES, Aug. 11, 2000, at A12.

<sup>83</sup> *State v. Schwartz*, 447 N.W.2d 422, 427 (Minn. 1989).