

ADDRESSING DNA THAT IMPLICATES YOUR CLIENT

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WHEN DNA LAWYERS ARE NOT AN OPTION: REQUIRED READING

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Pro-Defense or Neutral Literature

BNA, Criminal Practice Guide: DNA Evidence (2000) Vol. 1, Nos. 1 &2 (excellent start)

M. Windham, DNA Robo-Cops in Court, CACJ Forum, Vol. 27, No. 1 (2000)

Theodore Mifflin, Control of Contamination Associated with PCR and Other Amplification Reactions (2000), <http://www.mbpinc.com/mifflin.html>

C. Cantor & C. Smith, Genomics: The Science and Technology Behind the Human Genome Project (1999)

L. Mueller, The DNA Controversy and NRC II, in Statistical Methods in the Health Sciences: Genetics (1999)

W. Krstulja, Introduction to DNA Evidence, California Defender, Vol. 9, No. 1 (1999)

California State Auditors, Forensic Laboratories: Many Face Challenges Beyond Accreditation to Insure the Highest Quality Services (1998), <http://www.bsa.ca.gov/bsa/summaries/97025sum.html>

P. Lincoln, Forensic DNA Profiling Protocols, Methods in Molecular Biology, Vol 98 (1998)

E. Harris, A Low-Cost Approach to PCR: Appropriate Transfer of Biomolecular Techniques (1998)

J. Kelly & P. Wearney, Tainting Evidence: Inside the Scandals at the FBI Crime Lab (1998)

Symposium: The Evaluation of Forensic DNA Evidence, Jurimetrics Journal, Summer, 1997

J. Wronko, What Litigators Should Know About DNA Testing (1995), <http://newjerseylawyer.org/>

National Research Council, DNA Technology in Forensic Science (1992),
<http://www.nap.edu/books/0309045878/html/index.html> (full text)

Technical Journals other than Journal of Forensic Science; Forensic Science International (Start research at PubMed, <http://www4.ncbi.nlm.nih.gov/PubMed/>)

Defense or Neutral Internet Resources

- Scientific Testimony: An Online Journal (<http://www.scientific.org/>)
- Kruglick Forensic Resources (<http://www.kruglaw.com/>)
- NIST STR DNA Internet Database (<http://www.cstl.nist.gov/div831/strbase/index.htm>)
- Jerry Lyell's Forensic DNA Website (<http://www.dnalwyr.com/>)
- The DNA Litigation Project (<http://www.dnalitigation.com/>)
- NYSDA DNA website (http://www.nysda.org/Hot_Topics/DNA/dna.html)

Anything by Simon Ford, Jonathan Koehler, Laurence Mueller, William Shields, Mark Taylor, William Thompson

Transcripts

Pro-Admissibility Literature

David H. Kaye & George F. Sensabaugh, Jr Reference Guide on DNA Evidence, in Reference Manual on Scientific Evidence (2d. Ed. 2000), <http://air.fjc.gov/public/fjcweb.nsf/pages/16>

Giannelli & Imwinkelried, Scientific Evidence (3d ed. 1999)

I. Evett & B. Weir, Interpreting DNA Evidence (1998)

K. Inman & N. Rudin, An Introduction to Forensic DNA Analysis (1997)

NRC, The Evaluation of Forensic DNA Evidence (1996),
<http://books.nap.edu/books/0309053951/html/index.html> (full text)

Journal of Forensic Science; Forensic Science International

Pro-admissibility Internet Resources

- Perkin Elmer- Applied Biosystems: Human Identity Home Page
(<http://www.appliedbiosystems.com/fo/>)(access to all User Manuals for Perkin Elmer products)
- Promega: Genetic Identity Home Page (<http://www.promega.com/geneticidentity/Default.htm>)
- Proceedings of the Promega Human Identification Symposiums
(<http://www.promega.com/geneticidentity/proceed.html>)
- Proceedings of the International Society for Forensic Haemogenetics (<http://www.isfg.org/>;
<http://www.elsevier.com/inca/publications/store/6/2/0/7/9/6/index.htm>)
- The National Commission on the Future of DNA Evidence
(<http://www.ojp.usdoj.gov/nij/dna/welcome.html>)
- Denver District Attorney's Office, DNA Litigation Legal Support Page,
<http://denverda.org/legalresource/legalresource.htm>

Anything by, Bruce Budowle, R. Chakraborty, DH Kaye, George Sensabaugh

Standards and Guidelines

Short Tandem Repeat (STR) Interpretation Guidelines, Scientific Working Group on DNA Analysis Methods (SWGDM), Forensic Science Communications, vol. 2, No. 3 July 2000,
<http://www.fbi.gov/programs/lab/fsc/backissu/july2000/index.htm>

Statistical and Population Genetics Issues Affecting the Evaluation of the Frequency of Occurrence of DNA Profiles Calculated From Pertinent Population Database(s) (February 23, 2000), DNA Advisory Board, Forensic Science Communications, vol. 2, No. 3 July 2000,
<http://www.fbi.gov/programs/lab/fsc/backissu/july2000/index.htm>

Quality Assurance Standards for Convicted Offender DNA Databasing Laboratories (April 1999),

DNA Advisory Board, Forensic Science Communications, vol. 2, No. 3 July 2000,
<http://www.fbi.gov/programs/lab/fsc/backissu/july2000/index.htm>

What Every Law Enforcement Officer Should Know about DNA Evidence, National Commission on the Future of DNA Evidence (1999), <http://www.ojp.usdoj.gov/nij/pubs-sum/000614.htm>

Quality Assurance Standards for Forensic DNA Testing (1998), DNA Advisory Board, Forensic Science Communications, vol. 2, No. 3 July 2000,
<http://www.fbi.gov/programs/lab/fsc/backissu/july2000/index.htm>

Guidelines for a Quality Assurance Program for DNA Analysis (1995), Technical Working Group on DNA Analysis Methods (TWGDM), 1995, *Crime Laboratory Digest*. (Vol. 22, p. 21-43.),
<http://www.cstl.nist.gov/biotech/strbase/twgdam1.htm>

User's Manuals, Product Inserts

Analytical Protocols, Quality Assurance, & Quality Control Manuals for FBI, CAL DOJ, local lab, etc.

STR- BASED TESTING: THE LEGAL LANDSCAPE IN THE TRIAL COURTS

(most of the following rulings are available at www.scientific.org or <http://denverda.org/legalresource/legalresource.htm>)

STR- Based Testing excluded on prong one (Kelly/Daubert) grounds :

California cases

California Superior Court, Fresno County. *People v. Haaland*, No. 635214-0. June 19, 2000. (P.E. AmpFlstr Profiler Plus)(Ca. Dept. of Justice)

California Superior Court, San Francisco County. *People v. Bokin*, No. SCN 168461. May 6, 1999.(P.E. AmpFlstr Green 1 Kit)(San Francisco Police department Crime Lab)

Other states

Delaware Superior Court. *State v. Roth*, 2000 WL 970673. May 12, 2000 (unspecified STR test ruled inadmissible as more prejudicial than probative)

Colorado District Court, Boulder County. *People v. Shreck*, No. 98CR2475. April 12, 2000.(P.E. AmpFlstr Profiler Plus and Cofiler)(appeal pending).

Vermont District Court, Grand Isle County. *State v. Pfenning*, No. 57-4-96 GiCr. April 6, 2000.2000.(P.E. AmpFlstr Profiler Plus and Promega Powerplex) .

STR- Based Testing admitted:

California cases

California Superior Court, Los Angeles County. *People v. Hunt*, et. al., No. SA034500. October 24, 2000 (Profiler Plus & Cofiler)(Cellmark)(trial court rules that .05 theta factor must be used in calculating statistics)

California Superior Court, Tulare County. *People v. Elizarraras*, No. 50651. October 13, 2000 (Profiler Plus)(Ca. Dept of Justice)

California Superior Court, Sacramento County. *People v. Thomas*, No. SCR-29622. September 27, 2000 (Profiler Plus)

California Superior Court, San Francisco County. *People v. Moevao*, No. 168277. July 25, 2000 (P.E. AmpFlstr Blue & Green 1 Kits)(S.E.R.I.)

California Superior Court, Santa Barbara County. *People v. Hill*, No. 232982. April 18, 2000 (Profiler Plus)

California Superior Court, Sacramento County. *People v. Bertsch & Hronis*, No. 94F07295. October 20, 1999.(P.E. AmpFlstr Profiler Plus) (Ca. Dept. of Justice)

California Superior Court, Sacramento County. *People v. Hackney*, No. 97F02466, July 6, 1999 (Profiler Plus)(Forensic Science Associates)

Other states

Michigan Circuit Court, County of Lake. *People v. Cavin*, No. 00-4395-FY. October 20, 2000.2000.(P.E. AmpFlstr Profiler Plus)(Michigan State Police Laboratory)(consolidated hearing)

Michigan Circuit Court, County of Kent. *People v. Phillips*, No. 00-02025-FC. October 20, 2000.(P.E. AmpFlstr Profiler Plus)(Michigan State Police Laboratory)(consolidated hearing)

Michigan Circuit Court, County of Kent. *People v. Kopp*, No. 00-04014-FH. October 20, 2000.(P.E. AmpFlstr Profiler Plus)(Michigan State Police Laboratory)(consolidated hearing)

Colorado District Court, Adams County. *People v. Flores*, No. 99-CR2022. October 20, 2000 (Profiler Plus)

Florida Circuit Court, Broward County. *State v. Yisrael*, No. 99-20176CF10A. August 8, 2000.

(Profiler Plus)(Broward Sheriff's Office)

Missouri Circuit Court, St. Louis County. *State v. Boyd*, No. 991-3613. April 24, 2000.(Profiler Plus)(St. Louis Metropolitan Police Department)

Massachusetts Superior Court, Hampden County. *Commonwealth v. Gaynor*. April 13, 2000. (Promega CTT and Profiler Plus)(Cellmark)

Minnesota District Court, 4th District. *State v. Dishmon*, No. 99047345. March 3, 2000. (Profiler Plus & Cofiler)(Minnesota Bureau of Criminal Apprehension Laboratory)

Arizona Superior Court, Maricopa County. *State v. Lynch*, No. CR98-11390. August 20, 1999. (Profiler Plus & Cofiler)(Arizona Department of Public Safety)

Utah District Court, Salt Lake County. *State v. Butterfield*, No. 981909353. April 26, 1999. ("STR DNA testing")

STR- BASED TESTING: THE LEGAL LANDSCAPE IN THE APPELLATE COURTS

STR- Based Testing excluded on prong one (Kelly/Daubert) grounds :

None

STR- Based Testing excluded on prong three grounds:

State v. Jackson (Neb. 1998) 582 N.W.2d 317

STR- Based Testing admitted:

People v. Allen (1999) 72 Cal. App. 4th 1093 (Promega CTT)

State v. Jackson (Neb. 1998) 582 N.W.2d 317 (unspecified STR test)

Commonwealth v. Rosier (Mass. 1997) 685 N.E. 2d 739 (Promega CTT)

FAVORABLE APPELLATE COURT RULINGS ON OTHER DNA ISSUES

Chain of custody

Thomas v. State, 1999 Ala. Crim. App. LEXIS 298 ("Even the strongest evidence will be worthless -- or worse, might possibly lead to a false conviction -- if the evidence sample did not originate in connection with the crime. Given the great individuating potential of DNA evidence and the relative ease with which it can be mishandled or manipulated by the careless or the unscrupulous, the integrity of

the chain of custody is of paramount importance.")(collecting cases)

Barnes v. State, 704 So. 2d 487 (Ala. Cr. App. 1997) (defendant was denied his right to confrontation by the absence of a "link" in the chain of custody where the forensic scientist who had supposedly gathered the DNA specimen from the victim's body did not testify and instead, the prosecution relied on a receipt customarily prepared by pathologists who perform autopsies)

State v. Morel, 676 A.2d 1347, 1356 (R.I. 1996) ("In the preservation and testing of DNA evidence, careful attention and proper handling of the crime sample by police and scientists are crucial in defending chain-of-custody issues and in ensuring that laboratory mislabeling and inadvertent contamination have not occurred.")

Discovery

People v. Davis, 196 A.D. 2d 597, 601 N.Y.2d 174 (1993) (Lifecodes was required on constitutional grounds to turn over statistical data underlying a DNA probability estimate.)

United States v. Yee, 129 F.R.D. 629 (N.D. Ohio 1990) (magistrate granted discovery of matching criteria, environmental insult studies, population data and proficiency tests as predicate materials essential to the defense)

State v. Swartz (Minn. 1989) 447 N.W.2d 422 ("Access to the data, methodology, and actual results is critical so a defendant has at least an opportunity for independent expert review." Although a laboratory disclosed its protocol, laboratory notes, autorads, and frequency tables, its refusal to supply "more specific information on its methodology and population data base" was a reason to exclude the findings.)

Funding

Richardson v. State, 767 So.2d 195 (Miss. 2000) ("The defendant has a right to have an expert analyze DNA evidence when the State tenders an expert using that evidence. The State's consistent reference to the semen, suggesting that it was the defendant's, entitles the defendant to the opportunity to show that it was not his. It strains reason to deny the defendant's request to test evidence which he is entitled to have an expert analyze.")

Dubose v. State, 662 So.2d 1189 (Ala. 1995) (Ake does not apply only to psychiatric experts. Capital conviction is reversed where trial court refused to provide appellant with a DNA expert.)

Cade v. State, 658 S. 2d 552 (Fla. Ct. App. 1995)(trial court abused its discretion by denying defense request for appointment of DNA expert even though there was no showing of specific need, but only the general observation, “I can’t tell the court what I’m looking for because it is so complicated.”)

Polk v. State, 612 So.2d 381 (Miss. 1992) (In the present state of DNA testing technology, due process considerations require that a defendant have access to an independent expert.)

See generally, John Devlin, Genetics and Justice: An Indigent Defendant's Right to DNA Expert Assistance, 1998 U. Chi. Legal F. 395

Instructions

Crawford v. Commonwealth, 33 Va. App. 431; 534 S.E.2d 332; 2000 Va. App. LEXIS 652 (2000)(the trial court committed reversible error by instructing the jury "that DNA testing is deemed to be a reliable scientific technique under the laws of Virginia when admitted to prove the person's identity.")

California Superior Court, Siskiyou County. *People v. Bowcutt*, No. 53286. February 22, 1998. (“The Court together with counsel will have to fashion an instruction that makes it clear that simply because such evidence is based on scientific methodology the jury cannot abandon its sworn duty to consider all the evidence and that scientific evidence simply because it is scientific is entitled to no greater weight than other evidence introduced at trial. It is absolutely essential that the jury understand that the DNA evidence in and of itself is not the determiner of the Defendant’s guilt or innocence. The Court has thus far read no instruction that in its mind adequately instructs the jury in this area. To put it differently the Court believes that without a carefully crafted instruction in this area the Defendant’s rights cannot be protected.”)

Proficiency tests

Keen v. Commonwealth, 24 Va. App. 795, 485 S.E. 2d 659 (1997)(trial court erred in denying request for laboratory proficiency test data for the entire lab)

Williams v. State, 679 A.2d 1106 (Md. 1996)(the defense must be allowed to cross-examine one laboratory representative about errors committed by other analysts at the laboratory.)

United States v. Porter, 1994 WL 742297 (D.C. Super. Ct., Nov. 17, 1994).

(when the prosecution introduces testimony about the probability of a coincidentally matching profile, the defendant is entitled to introduce testimony about the laboratory's proficiency tests)

Prong three(correct scientific procedure) cases

People v. Venegas, 18 Cal.4th 47, 954 P.2d 525 (1998) (The statistical calculation phase of the RFLP analysis, which is used to estimate the frequency of a chance DNA match, is subject to both a first-prong Kelly inquiry, i.e., whether the statistical procedures were generally accepted in the relevant scientific community, and a third-prong Kelly inquiry, i.e., whether correct scientific procedures were followed in the case.)

People v. Venegas, 18 Cal.4th 47, 954 P.2d 525 (1998) (The court reaffirms the continued vitality of the third-prong of the Kelly inquiry and endorses continued third-prong foundational hearings in cases where, as with DNA typing, expert testimony is necessary to determine whether correct scientific procedures were used and to assess the effect of any failure to follow such procedures.)

People v. Venegas, 18 Cal.4th 47, 954 P.2d 525 (1998) (The FBI failed to use correct scientific procedures in its modified ceiling DNA calculations using floating bins of only plus or minus 2.5 percent, since the bins were narrower than the scope of the FBI's matching criterion, and this failure did not affect only the weight of the evidence but was error within the meaning of Kelly's third prong.)

People v. Barney (1992) 8 Cal. App. 4th 798, 812-813(“ The NRC Report concludes there is indeed a need for standardization of laboratory procedures and proficiency testing (as well as appropriate accreditation of laboratories) to ensure the quality of DNA laboratory analysis. But the absence of such safeguards does not mean that DNA analysis is not generally accepted....Rather, the absence of these safeguards goes to the question whether a laboratory has complied with generally accepted standards in a given case, or, as stated in Kelly terms, whether the prosecutor has shown that “correct scientific procedures were utilized in the particular case.”)

State v. Jackson (Neb. 1998) 255 Neb. 68, 582 N. W. 2d 317 (STR testing results should not have been admitted absent a foundation that the lab had followed its own testing protocols)

Lavis v. Clair, 226 A.D.2d 535, 640 N.Y.S.2d 609 (2d Dep't 1996)(In paternity proceeding, trial court did not err in refusing to admit results of DNA testing, since testing was not performed by approved laboratory as required by state statute.) Cf., Penal Code Section 297(a)(only ASCLD/LAB certified labs may do DNA testing on crime scene samples)

United States v. Martinez (8th Cir. 1993) 3 F. 3d 1191 (correct scientific procedures must be shown under *Daubert*.)

United States v. Two Bulls (8th Cir. 1990) 918 F. 2d 56, vacated for rehearing en banc, app. Dismissed due to death of defendant, 925 F. 2d 1127 (“We hold that it was error for the trial court to determine the admissibility of the DNA evidence without determining whether the testing procedures used by the FBI lab in this case were conducted properly.”)

People v Keene, 591 NYS2d 733, 740 (Queens Cty Sup 1992) (holding DNA evidence inadmissible because the specific laboratory procedure at issue was not generally accepted)

People v. Castro (Sup. Ct. 1989) 545 N.Y.S.2d 985 (“In a piercing attack upon each molecule of evidence presented, the defense was successful in demonstrating to this court that the testing laboratory failed in its responsibility to perform the accepted scientific techniques and experiments.”)

State v. Swartz (Minn. 1989) 447 N.W.2d 422 (“DNA typing has gained general acceptance in the scientific community”, but “the laboratory in this case did not comport with appropriate standards.”)

Right to a continuance

Hunter v. State, 316 Ark. 746, 875 S.W.2d 63 (1994) (reversing the trial court for failing to grant a continuance when (1) Hunter's DNA expert had no chance to examine the State's evidence, procedures, and protocol, and (2) Hunter had located an expert, but could not take advantage of her expertise without being provided the State's information).

Right to independent testing

People v. Coddington, 23 Cal.4th 529 (Cal. 2000) (work product privilege precludes adverse comment or questioning about non-testifying defense experts)

Prince v. Superior Court (1992) 8 Cal App 4th 1176 (an order that would require defendant to turn over the results of DNA testing even if he did not intend to introduce this evidence at trial denied the defendant the effective assistance of counsel)

Right to prong one admissibility hearing

Murray v. State, 692 So.2d 157 (Fla. 1997) (conviction reversed for failure to satisfy *Frye* requirement and because expert misled the court as to the NRC's acceptance of PCR testing)

Ramirez v. State, 651 So.2d 1164 (Fla. 1995) (capital conviction reversed on due process grounds)

where defense was precluded from presenting evidence during hearing on admissibility of prosecutor's expert testimony concerning knife-mark comparisons.)

Harrison v. State, 644 N.E.2d 1243 (Ind. 1995) (Before expert scientific evidence is admitted in Indiana, trial court must be satisfied that scientific principles upon which expert testimony rests are reliable, that witness is qualified, and that testimony's probative value is not substantially outweighed by dangers of unfair prejudice. On facts of this case, no reversible error occurred in admission of testimony regarding polymerase chain reaction (PCR) DNA testing, although trial court should have conducted a hearing on admissibility.)

Statistics

Brim v. Florida, 2000 WL 1568741 (Fla.App. 2 Dist. 2000)(case remanded with detailed instructions regarding admissibility of statistics. Among other things, trial court is to “(c)onfirm that the FBI population frequency table used in calculating the statistics used in Mr. Brim's case for each specific probe was generally accepted by the relevant scientific community at the time of the trial and, even if more sophisticated tables are in current use, that subsequent research has not discredited the reliability of these tables. Consider whether these tables have a scientific use outside the field of forensics and, if not, whether that should influence their legal reliability.” Court is also instructed to “(d)etermine whether the failure to disclose the level of uncertainty in these calculations is something that is generally accepted within the relevant scientific community. Examine whether a court should require such a disclosure in the presentation of the evidence, as a matter of law, even if experts are willing to forego the disclosure, or whether this can be adequately addressed during cross-examination.”

State v. Williams, 574 N.W. 2d 293 (Iowa 1998)(trial court erred in admitting matching evidence without statistics)

Hull v. State, 687 So. 2d 708 (Miss. 1996)(trial court erred in admitting matching evidence without statistics)

Connecticut v. Sivri, 646 A.2d 169 (Conn. 1994) (remanding case for further deliberations on population frequency calculations)

Nebraska v. Carter, 524 N.W.2d 763 (Neb. 1994) (limiting evidence on statistical frequency to two racial groups when the racial group of the perpetrator was unknown was prejudicial)

Washington v. Cauthron, 846 P.2d 502 (Wash. 1993) (ordering new trial because of the absence of probability statistics).

State v. Vandebogart, 616 A.2d 483 (N.H. 1992) (remanding case for a new trial since statistical technique used by the FBI in estimating population frequencies was not generally accepted by the

relevant scientific community)

Massachusetts v. Curnin, 565 N.E.2d 440 (Mass. 1991) (concluding that results of DNA testing were improperly admitted because of absence of general acceptance or inherent rationality of the process used)