# *CONTINUING LEGAL EDUCATION*
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# *The "Ins and Outs" of New York City Office of Chief Medical Examiner and Emerging Legal DNA Issues*

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# Current and Emerging DNA Legal Issues

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Attorneys today must keep pace with advances in forensic DNA testing and database searches, as well as how judicial decisions impact long-standing evidentiary and testimonial practices. These emerging DNA legal issues are certainly challenging, but an educated attorney is certainly more than capable of handling these complex forensic legal topics.

This lecture will address legal aspects of traditional DNA related issues such as discovery obligations, as well as emerging DNA-related legal issues such as partial matching, familial searching and access-to-offender-database requests.

At the conclusion of this lecture, participants will be aware of advances in forensic DNA testing, expansion of traditional offender database searches, and how the legal system is keeping pace with and addressing these scientific changes.

## THE NATIONAL ACADEMY OF SCIENCES REPORT

"*No forensic method other than nuclear DNA analysis has been rigorously shown to have the capacity and with a high degree of certainty, support conclusions about individualization (more commonly known as matching of an unknown item of evidence) to a specific known source.*" National Academy of Sciences report.

In February 2009, the Committee on Identifying the Needs of the Forensic Sciences Community at the National Academy of Sciences released a report entitled *Strengthening Forensic Science in the United States: A Path Forward.* The report was prepared by an independent committee of diverse individuals (experts and practitioners in the fields of forensic science, engineering, medicine, and the law) who, during a two year period, received testimony, reviewed materials, and scrutinized 'the state of forensic science' in the United States.

The committee tried to address such wide ranging topics as inconsistent practices in crime laboratories, subjective interpretations, exaggerated testimony, the coroner system, scientific working groups, and a paucity of research. The NAS report brings together issues related to forensic science and practice, questions of oversight of the science and practice, and matters of the law.

The 'NAS Report' (as it is colloquially called) offered a wide ranging assessment and critique of the many disciplines of forensic science and proffered the following thirteen recommendations:

1. To promote the development of forensic science into a mature field of multidisciplinary research and practice, Congress should establish and fund an independent federal entity, the National Institute of Forensic Science, which will establish and enforce best practices, establish standards for mandatory accreditation of forensic science laboratories and mandatory certification of forensic scientists.

2. The Forensic Science community should establish standard terminology to be used in reporting of results of forensic science testing.

3. Congress should appropriate funding to support research development – to measure the reliability and accuracy of forensic analysis and to develop quantifiable measures of uncertainty in conclusions of forensic analysis.

4. All public forensic laboratories should be removed from the administrative control of law enforcement agencies or prosecutors' offices.

5. Congress should appropriate funding to support research studies on human observer bias, sources of human error in forensic examination, and effects of contextual bias in forensic practice.

6. The Forensic Science community needs to develop tools for advancing measurement, validation, reliability, information sharing and proficiency testing in forensic science, and establish protocols for forensic examinations, methods and practices.

7. Mandate laboratory accreditation and individual certification of forensic science professionals.

8. The Forensic Science community must establish quality control procedures designed to identify mistakes, fraud and bias; confirm continued validity and reliability of standard operating procedures and protocols; ensure best practices are followed.

9. A national code of ethics for all forensic science disciplines should be established and enforced.

10. Improve and develop graduate studies in multidisciplinary fields (physical and life sciences) critical to forensic science practice.

11. Improve medicolegal death investigations by:

a. Appropriating funds to establish medical examiner systems, with the goal of eliminating existing coroner systems.

b. Appropriating resources to support education, training and research in forensic pathology.

c. Establishing a Scientific Working Group for forensic pathology and medicolegal death investigation; develop and promote standards for best practices.

d. Mandating all medical examiner offices be accredited.

e. Restricting federal funding to accredited medical examiner offices.

f. Requiring that all medicolegal autopsies be performed or supervised by a board-certified forensic pathologist.

7. Fund and launch broad-based effort to achieve nationwide fingerprint data interoperability. Develop standards for communicating image and data among AFIS [Automated Fingerprint Identification System]. Develop standards to be used with computer algorithms to map, record and recognize features in fingerprint images and fund research into accuracy of these algorithms (quantitation of error rate).

8. Provide funding (to CDC and FBI) to prepare forensic scientists and crime scene investigators for potential role in managing events affecting homeland security – including interoperability exercises between local forensic personnel and federal counterterrorism organizations.

The significance of the NAS report is its attempt to address (and redress) significant challenges within the forensic science community. Tackling a broad range of forensic science disciplines, the report strongly criticizes the forensic science disciplines of pattern interpretation (i.e., tool mark, bite mark, shoe print, fingerprint impressions

The NAS report explores the need to standardize requirements of accreditation and certification, as well as encourage research to better evaluate the accuracy of forensic analysis.

The executive summary of the NAS report is available to download for free at http://www.nap.edu/catalog.php?record_id=12589

**IMPACT OF DNA LEGISLATION**

What impact does proposed DNA legislation have on a public forensic laboratory? Elimination of locally-maintained DNA database? Evidence Preservation? Court-ordered CODIS uploads or comparisons? Collaterally, what impact does proposed DNA legislation have on prosecutors and public defenders? Expansion of entitlement to post-conviction DNA testing to individuals who have pled guilty? Expansion of offender databases to include persons arrested for violent felony offenses?

**In the last few years, on both a national and individual state level, there has been an increase in legislative initiatives designed to create a statutory minimum period of time that forensic evidence or samples be retained by investigating agencies or public forensic laboratories. Preservation and retention of crime scene evidence may be a result of or reaction to, the number of DNA-based exonerations wherein a convicted offender spent years searching for original crime scene evidence.**

**A public forensic laboratory would certainly be impacted by a requirement to preserve evidence for a certain period of time; in the case of a DNA laboratory, this would most likely mean DNA extracts and cuttings as many laboratories return physical items of evidence to the custody of the investigating police department after forensic testing is concluded.**

Another 'topic' of legislative discussion is the proposal that a defendant be entitled to ask a Court to order comparisons of crime scene DNA profiles to the local, state and national databases. From the perspective of a CODIS-participating forensic laboratory, legislation must include language that such court-ordered databank searches be conducted "*in a manner consistent with federal and state laws and regulations governing such databases.*" In the absence of such language, CODIS-participating laboratories risk being directed to perform database searches which may otherwise be impermissible.

## DISCOVERY OBLIGATIONS AND PARAMETERS

Many public forensic DNA laboratories do not fall within the administrative auspices of law enforcement, and consequently operate independent of a police department, sheriff office or local prosecutor office. Therefore, how a public forensic laboratory handles discovery requests from attorneys involved in a criminal investigation or prosecution may be important to know. For example, if a forensic laboratory operates independent of a law enforcement agency or prosecutor's office, then the laboratory would not be 'subject to', nor obliged to adhere to the parameters of a discovery statute.

Beyond the report and case file generated contemporaneous to DNA testing, an attorney may request that a forensic laboratory produce any of the following additional documents or data: protocols or manuals applicable to the testing performed, the analysts' curriculum vitae, the analysts' proficiency test results, the tasks and standards or job description of the analysts who performed forensic testing, electronic or raw data, a list of the software utilized in the forensic testing process, certificates of accreditation, etc.

In assessing a demand for materials in the possession of or relating to testing performed by a forensic laboratory, a prosecutor and defense attorney may want to asses:

i. whether documents or data requested by a defendant fall within the scope of applicable discovery statutes;

ii. whether it is proper for a defendant in a criminal proceeding to use a subpoena duces tecum to circumvent the limitations of the discovery statute;

iii. whether the defendant has established factual predicate for the issuance of a subpoena duces tecum;

iv. if the materials sought by the defendant constitute relevant (and possibly exculpatory) material.

## PROTECTIVE ORDERS

On occasion, commonly at the request of a defendant, a Court may direct a public forensic laboratory to limit the scope of forensic testing (e.g., to strictly compare a defendant's known DNA sample to specific case evidence) or to deviate from a standard laboratory practice (e.g., refrain from entering defendant's known DNA profile into a locally-maintained DNA database.

It is imperative that the local forensic laboratory be notified of the Court's direction. Prosecutors and defense attorneys must ensure that such protections are conveyed to the forensic laboratory in an appropriate manner (i.e., via a Court Order, not simply a telephone call), as well as in a timely fashion.

A Protective Order which is poorly worded (e.g., "the laboratory is directed not to enter the defendant's swab into the state or federal database") is typically the result of a misunderstanding (by the Courts or the requesting attorney) of the various DNA databases and/or the type of forensic analysis performed by the local public forensic laboratory. If a Court's Order is not clear to the public forensic laboratory to whom it is directed, the laboratory will ask that the Order be amended or clarified.

## SPEEDY TRIAL

The time period it takes to perform forensic DNA testing may be chargeable or excludable time, in the context of a prosecutor's speedy trial statutory obligation, depending on by an individual jurisdictions' criminal procedure law.

One important factor to keep in mind is whether the forensic laboratory which performed DNA testing in a criminal case is 'under the control' of the prosecutor's office. Meaning, if a forensic laboratory is under the administrative auspices of law enforcement or a prosecutor's office, the prosecutor may be held to keep 'closer watch' or track of DNA testing. On the other hand, if the forensic laboratory performing DNA analysis operates independent from law enforcement or a prosecutor's office, this may impact whether the time period in which DNA testing is performed is chargeable or excludable.

DNA testing may be excludable, in calculating the 'speedy trial clock' if the prosecutor

has exercised due diligence in tracking the testing process and obtaining results. The question then is how does the prosecutor demonstrate this due diligence? It is the practice of many public forensic laboratories to keep 'case contacts' of communications between the parties who are investigating or prosecuting a criminal case (i.e., the assigned case detective or prosecutors) and the forensic analysts who are performing or supervising testing of a specific case.

## LOW TEMPLATE DNA

Low Template testing (sometimes also referred to as Low Copy DNA, High Sensitivity DNA, or 'Touch' DNA) allows a DNA profile to be developed from smaller amounts of DNA.

Low template DNA testing uses the same procedures as traditional ("High Copy") DNA testing, with slight modifications to increase the sensitivity of the testing process. High Copy and Low Template DNA analysis differ only in the amount of DNA amplified and the number of times the extracted DNA is amplified.

In simple terms, there are four basic steps in the DNA testing process: extraction, quantitation, amplification, and electrophoresis.

In extraction, chemicals are added to the evidence sample to be analyzed. These chemicals remove the DNA from the sample by isolating the DNA from the rest of the material. The extracted DNA is then purified. Quantitation is next.

During quantitation, the amount and quality of the DNA that was extracted is determined. If quantitation yields 20 pg/ul or more (or more than 100pg in the amplification), then High Copy DNA analysis may be performed. If quantitation yields less than 20 pg/ul (or 100pg or less in the amplification), then Low Template DNA analysis may be utilized. Amplification is next.

Amplification is often described as "molecular xeroxing": a process during which a small amount of a sample is copied in sufficient quantities so that a DNA profile can be developed. During amplification, the extracted DNA is added to a mixture which contains taq polymerase enzyme and DNA primers (short synthetic pieces of DNA that match defined locations of base pairings). This 'mixture' is then placed in a heating device that cycles it through successive temperature plateaus. During this process, the DNA repeatedly copies itself, or "amplifies."

With Low Template analysis, in order to increase the sensitivity of the process, the DNA is amplified in exactly the same way as traditional DNA analysis, but with three additional cycles of amplification. In High Copy DNA analysis, the amplification process is repeated 28 times. In Low Template DNA analysis, the amplification process is repeated 31 times.

In February 2010, at the conclusion of a FRYE hearing, where a total of seven forensic DNA experts testified, a New York City Court ruled that Low Template DNA testing as performed by the New York City Office of Chief Medical Examiner is generally accepted as reliable in the forensic scientific community, consistently yields reliable results and is therefore admissible at trial. The Court also ruled Low Template DNA testing as performed by the New York City Office of Chief Medical Examiner is not a novel scientific procedure within the scope of the FRYE doctrine.

## IS A DNA REPORT 'TESTIMONIAL' IN A CRAWFORD ANALYSIS

The United States Supreme Court's decision in Crawford v. Washington altered the landscape of a defendant's Sixth Amendment right to confrontation with respect to hearsay evidence. In this 2004 decision, the Court ruled that out-of-court statements which are "testimonial" in nature are prohibited unless the witness who made such testimonial statement is unavailable *and* the defendant had a prior opportunity to cross-examine him/her. The Crawford decision triggered a significant shift in the analysis of hearsay evidence. Before Crawford, the key issue in the evaluation of hearsay evidence was whether there were "circumstantial guarantees of reliability." After Crawford, the focus shifted to whether or not the proposed evidence is "testimonial."

Factors that may be relevant in determining whether a DNA report is testimonial in a Crawford analysis:

1) Whether the agency that produced the record is independent of law enforcement.

2) Whether the document reflects objective facts at the time of their recording.

3) Whether the report has been biased in favor of law enforcement.

4) Whether the report accuses the defendant by directly linking him or her to the crime.

Many courts have held that DNA reports are *not* "testimonial" (under the Crawford analysis), since they are merely contemporaneous recordings of a testing process.

Courts have reasoned that raw data in the form of non-identifying graphical information from a machine that conducts forensic testing is not 'testimonial' in any meaningful sense. Moreover, graphical DNA test results, standing alone, shed no light on the guilt of the accused in the absence of an expert's opinion that the results genetically match a known sample.

**MELENDEZ DIAZ**

In Melendez-Diaz v. Massachusetts, 129 S.Ct. 2527 (2009), the United States Supreme Court ruled it was a violation of the defendant's Sixth Amendment right of confrontation when the prosecutor submitted results of forensic analysis though an affidavit and not by the live testimony of the analyst who performed the testing.

At trial, the prosecutor had introduced into evidence three 'certificates of analysis' which memorialized the results of forensic analysis: that the substance was in fact cocaine, as well as the weight of the narcotics. The certificates were also notarized in accordance with Massachusetts law. Defendant Melendez-Diaz objected to their admission - asserting that the Supreme Court decision in Crawford v. Washington required that the forensic analyst testify in person as to the results. The trial court overruled the objection, and admitted the certificates as evidence of the conclusions of the forensic testing.

The Supreme Court held that the certificates constituted testimonial evidence in that they were prepared (while contemporaneous to the testing) for a possible, later criminal trial – and therefore were the functionally equivalent to live, in-court direct testimony. The Court consequently ruled that the forensic analyst who tested the narcotic substance was a witness for purposes of the Confrontation clause. Therefore, because the trial court did not afford defendant Melendez-Diaz the opportunity to confront the forensic analyst, his Sixth Amendment right of confrontation was violated.

Significantly, the Court held that that it was *not* ruling that anyone who's testimony may be relevant in establishing the chain of custody, authenticity of the sample, or accuracy of the testing device, must appear in person as part of the prosecution's case.

Laboratory technicians are not engaged in a law enforcement function – meaning, a search for evidence in anticipation of prosecution or trial. Rather, their data entries are a routine, objective cataloging the results of routine tests.

For confrontation clause purposes, the United States Supreme Court *has not held*, and it is not the case, that anyone whose testimony may be relevant in establishing the chain of custody, authenticity of a sample, or accuracy of a testing device, must appear in person as part of the prosecution's case. While it is the obligation of the prosecution to establish the chain of custody, this does not mean that everyone who laid hands on the evidence must be called. Gaps in the chain of custody normally go to the weight of the evidence rather than its admissibility. It is up to the prosecution to decide what steps in the chain of custody are so crucial as to require evidence; but what testimony is introduced must (if the defendant objects) be introduced live. Additionally, documents prepared in the regular course of equipment maintenance may well qualify as nontestimonial records

A defendant's ability to subpoena analysts of evidence incriminating the accused, whether pursuant to state law or the compulsory process clause, is no substitute for the right of confrontation in part because the confrontation clause imposes a burden on the

prosecution to present its witnesses, not on the defendant to bring those adverse witnesses into court.

In the wake of the United States Supreme Court's decision in Melendez-Diaz, an emerging question is whether the Confrontation Clause permits the prosecution to introduce testimonial statements of a non-testifying forensic analyst through the in-court testimony of a supervisor or other person who did not perform the laboratory analysis described in the statements. Does the defendant have a constitutional right to confront at the very least the analyst who actually conducted the tests? Or is it the province of the prosecutor to choose how to present and prove scientific results, as long as the choice features a live witness?

This particular issue will be the subject of many appeals and decisions to come – not limited merely to DNA forensic analysts, but also to medical examiners who testify concerning cause and manner death, etc.

## PARTIAL MATCHING & FAMILIAL SEARCHING

A 'partial match' occurs or reveals itself in the 'CODIS candidate match stage' – where a databank search indicates a possible familial association between a forensic DNA profile and a known offender's DNA profile.

When a 'partial match' occurs between a forensic DNA profile and an offender DNA profile, it is critical to understand that the offender is *not* the source of the crime scene profile. Meaning, the offender is excluded as the source of the crime scene profile. However, with a 'partial match', a possibility may exist that a close biological relative of the offender might be the actual source of the crime scene profile. A potential familial relationship *may* exist between the partial-matching offender and the perpetrator.

When a 'partial match' is detected, the question becomes whether to release the name of an offender – excluded as the source of a crime scene profile – who may have a close biological relative who may be the source of the crime scene profile.

The number of 'false positive partial matches' is influenced by the size of the offender database searched. As offender DNA databases get larger, the number of unrelated individuals who fortuitously share at least one allele at all loci increases. The larger the offender database searched, the greater number of 'false positives.' The smaller the database searched, the lower the probability of finding false positive partial matches. Conversely, the smaller the database searched, the greater the likelihood of finding a true familial lead.

Familial searching is a means to attempt to identify and locate the biological children, parents, siblings (who may be the true source of a forensic DNA profile) of the millions of the known offenders whose DNA profiles are on file in the national DNA index.

Familial searching is a 'database trolling technique' whereby a crime scene profile is purposefully compared against an offender databank within the intent of generating a list of candidate profiles that appear to be genetically similar, and then use the list of known offenders as an investigative tool to investigate their close familial relatives.

Opponents of Partial Matching and Familial Searching argue this creates lifelong genetic surveillance – where offenders unwittingly become genetic informants. Opponents also caution that offender databases were never originally intended to be used to conduct familial searching and may erode judicial confidence in the constitutionality of offender databases.

In 2006, the FBI requested the Scientific Working Group on DNA Analysis Methods (SWGDAM) to explore this phenomenon of partial matches and to make recommendations about how these CODIS searches which result in partial matches should be handled.

New York State is poised to join Colorado and California as states which have formalized an approved partial match policy.

## DATABANK ACCESS

"Your honor, the principal witness my client is a computer database."

An emerging DNA legal issue is the request by a defendant to access a State's offender database in an effort to challenge the reliability of a match, or 'unearth' the existence of alternate suspects by studying the actual incidences of coincidental matches (e.g., the number of pairs of individuals within the offender database who 'match' each other at 9 or 10 loci).

While it may be highly doubtful that a Court would have the authority to order the release of full genetic DNA profiles of offenders who (due to genetics or fortuitousness) share a high number of shared loci, a question is whether a Court may order a State to run a search of its offender database for the number of pairs of offenders who match at 9 loci or the number of pairs of offenders who match at 10 loci.

These requests for database searches are aimed at challenging the statistical calculations utilized in determining the DNA rarity of a DNA profile: a random match probability in the general population versus a random match probability within the offender database.

## CASE LAW REFERENCES

**DNA-based Prosecutions**

People v. Person, 74 AD3d 1239 (2d Dept June 22, 2010)(defendant's DNA on cigarette butt found outside house, albeit near hatchet and shattered glass doors, is subject to innocent inferences and is insufficient to sustain conviction of burglary beyond a reasonable doubt; conviction reversed; indictment dismissed).

People v. Goodman, J. Dwyer, Kings County Supreme Court, decided September 16, 2010 (circumstantial evidence of defendant's identity as perpetrator of commercial burglary(only evidence linking defendant to theft of money from locked cash box was DNA recovered from a screwdriver found near the cash box) is legally sufficient to sustain indictment).

**Complex Discovery Request**

People v. Heyward, J. Zweibel, New York County Supreme Court, decided July 6, 2010 (defense request for electronic data associated with DNA testing denied; information is not discoverable under CPL 240.20)

People v. Sandy, J. Griffin, Queens County Supreme Court, decided September 14, 2010 (defense request for electronic data associated with DNA testing denied; defendant has provided no legal authority in support of proposition that these demands are within the scope of CPL 240.20)

**Motion to Compel Defendant to Provide Exemplar for DNA comparison**

People v. Jones, J. Dwyer, Kings County Supreme Court, decided July 27, 2010 (People have demonstrated probable cause to believe defendant committed a crime and clear indication that requested buccal swab would yield material evidence; motion to compel granted).

**Motion for Protective Order**

People v. Noel, J. Walsh, Kings County Supreme Court, decided December 9, 2009 (defendant's motion for protective order (that forensic laboratory be directed to strictly compare defendant's known DNA profile to specific case evidence and to refrain from entering his profile into local DNA databank) denied).

People v. Zelaya, J. Mullen, Kings County Supreme Court, decided January 14, 2008) (defendant's motion for protective order (that forensic laboratory be directed to strictly compare defendant's known DNA profile to specific case evidence and to refrain from entering his profile into local DNA databank) denied).

**Speedy Trial**

People v. Robinson, 47 AD3d 847 (2d Dept 2008), lv denied 10 NY3d 869 (2008) (time period necessary to obtain the results of DNA testing in a rape case was excludable as a delay occasioned by exceptional circumstances).

People v. Bell, J. Scherer, New York County Supreme Court, decided July 26, 2007(defendant's motion to dismiss on speedy trial grounds is denied; time period necessary to obtain DNA results constitutes "exceptional circumstances, and is therefore excludable time).

People v. Smith and Rogers, J. Ward, New York County Supreme Court, decided June 17, 2010 )(defendant's motion to dismiss on speedy trial grounds is granted).

People v. Ellison and Hadaway, 2010 N.Y. Misc. LEXIS 3882, 2010 NY Slip Op 51477U, 244 N.Y.L.J. 38, J. Ward, New York County Supreme Court, decided August 18, 2010 (defendant's motion to dismiss on speedy trial grounds is granted).

**Sixth Amendment: Right of Confrontation**

People v. Brown, 13 N.Y.3d 332 (2010)(records of a contract laboratory admissible through the testimony of supervising analyst).

People v. Campbell, 62 AD3d 535 (1st Dept 2009)(Court rejects defendant's Confrontation Clause claims relating to DNA test documents).

People v. Palmer, 65 A.D.3d 1389 (2nd Dept 2009)(lv denied, 14 N.Y.3d 891, 2010)( admission into evidence of a laboratory report containing DNA profile data prepared by a laboratory analyst who did not testify at trial did not violate his Sixth Amendment right to confrontation under Crawford as the report did not constitute a testimonial statement).

People v. Meekins, 10 NY3d 136 (2008)(DNA data generated is not testimonial; DNA records are a contemporaneous recording of procedures employed and state the results of a well-recognized scientific test).

People v. Freycinet, 11 NY3d 38 (2008) (non-testifying ME's findings admissible).

United States v. Erbo, 2006 US Dist Lexis 5244 (autopsy reports not testimonial as that term is used in *Crawford)*.

**John Doe Indictment**

People v. Martinez, 52 AD3d 68 (1st Dept 2008)(court upholds John Doe DNA indictment).

**Low Template DNA**
People v. Megnath, Supreme Court of the State of New York, Queens County, 2010 NY Slip Op 20037; 2010 NY Misc LEXIS 223
February 8, 2010, decided. (Low Template DNA testing as performed by the New York City Office of Chief Medical Examiner is generally accepted as reliable in the forensic scientific community and is not a novel scientific
procedure within the scope of the FRYE doctrine).

People v. Tribble , J. Barrett, Bronx County Supreme Court, decided June 3, 2010 (defendant's motion for a FRYE hearing denied).

People v. Atkins and Cherry, J. Carruthers, New York County Supreme Court, decided June 8, 2010 (defendant's motion for a FRYE hearing denied).

**Statistical Analysis of DNA results**
People v. Bell, 299 AD2d 557 (2d Dept. November 2002)(court rejects defendant's contention that DNA evidence should not have been admitted without statistical analysis).

**Post Conviction DNA Testing**
People v. Byrdsong, 33 AD 3d 175 (2$^{d}$ Dept. August 2006), lv denied 7 NY3d 900 (2006)(pursuant to statutory language, conviction by verdict and judgment after trial is explicit requirement for obtaining post conviction DNA testing; this relief unavailable to defendant because of his guilty plea).

**Liability for administrative or investigative role in submitting DNA evidence for post conviction testing**
Warney v. Monroe County, 587 F3d 113 (2d Cir. 2009)(court holds that prosecutors enjoy absolute immunity where testing undertaken in connection with post-trial proceedings, and therefore integral to the advocacy function).
Colon v. Kuhlmann, 865 F.2d 20 (2d Cir. 1988) (a police laboratory test for the presence of sperm on a rape kit slide did not violate the defendant's constitutional rights, even though the test rendered the slide useless for serological analysis and the defendant lacked any alternative biological evidence which could rule him out as the rapist).

**Recommended DNA Resources:**
The National Institute of Justice has an online course *Essential Aspects of Forensic DNA Testing*, delivered at no cost by the Forensic Training Network. The main goal of this NIJ-sponsored online course is to provide 'students' with an understanding of the important role DNA plays in forensic science; introduce the steps involved in forensic DNA testing using the latest methods and technologies; and provide a basic understanding of the National DNA database system.
The President's DNA Initiative: Includes information on forensic DNA and its uses, case

studies, statutes and case law

Denver District Attorney's Office resource page: Includes rulings, statistics, forensic DNA articles, and good links

American Society of Law, Medicine and Ethics DNA Fingerprinting and Civil Liberties Project: Includes presentations, reports, summaries of important legislation, cases and studies of note