

Arresting Development: A Call for North Carolina to Expand Its Forensic Database by Collecting DNA from Felony Arrestees

*The information encoded in your DNA determines your unique biological characteristics, such as sex, eye color, age and Social Security number.*¹

INTRODUCTION

For nearly twenty years, state and federal law enforcement agencies have turned to DNA databases as a means of identifying offenders, generating leads in cold cases, and on occasion, exonerating the innocent. Naturally, the larger the database, the more likely it is that a new DNA profile entered into the system will generate a match. Currently, fifty states maintain DNA databases, and of those, forty-seven—including North Carolina—collect and store DNA profiles from all persons convicted of any felony offense. Statutes requiring the collection of DNA profiles from convicts are a positive step toward improving the database tools; however, by only collecting samples upon conviction, a valuable opportunity for more comprehensive coverage is lost. This opportunity presents itself when persons are *arrested* for the commission of violent-felonies.

Imagine a stranger silently cuts the window screen of a bedroom where a twelve-year-old girl sleeps. He enters, and using the girl's pillow, muffles her cries so her mother down the hall hears nothing while the unspeakable occurs. The offender then leaves the silently sobbing girl and slips back out the window as quietly as he entered. Sadly, the perpetrator strikes five more times over the next three months, and even though DNA samples are collected, no fingerprints or other more traditional types of forensic evidence are ever found. Then, as suddenly as the crimes began, they stop, and the criminal is never brought to justice.

Now imagine the same scenario, but as soon as the first DNA sample is collected, the police obtain a hit in the DNA database. The number assigned to the sample matches the number associated with a man arrested for felony assault four years ago but, because of a technicality, was never convicted. The police run with this lead and, before he can strike again, arrest the otherwise inconspicuous perpetrator living in the girl's community. Without the information gleaned from the database, he would have never been a suspect. Had collection of his

1. DAVE BARRY, *DAVE BARRY IS FROM MARS AND VENUS* 146 (Random House 1997).

DNA hinged upon a conviction for the prior charged assault, it would have never been collected, and other victims would have been subjected to the offender's machinations.

Unfortunately, the latter scenario is not presently possible in North Carolina. While the federal government and twenty-one states currently take DNA samples upon booking for violent felonies, North Carolina has yet to join the growing trend toward obtaining samples from felony arrestees. However, such legislation has been proposed in both branches of the General Assembly, and although the bills have died each time at the committee level, this Comment proposes that such efforts should be taken off the back burner and placed at the very front of the legislative agenda.

I. LAW ENFORCEMENT AND DNA DATABASES

The speed with which law enforcement adopted DNA profiling and database technology is indicative of the value such tools provide. In the mid 1980s, a British scientist discovered that some regions of all DNA contain repeating sequences of measurable variations, or "alleles."² These repeating sequences are what make up one's "genotype," commonly referred to as the "DNA profile."³ Most importantly, these patterns were found to vary from person to person and thus could serve as the equivalent of one's fingerprint in a biological sample.⁴

Law enforcement moved quickly to apply this discovery to solving crimes. While fingerprinting was—and still is—an effective and accepted way to determine someone's identity, prints carry with them certain limitations that DNA overcomes.⁵ DNA does not smudge, can-

2. D.H. Kaye, *The Impact of Behavioral Genetics on the Criminal Law: Behavioral Genetics Research and Criminal DNA Databases*, 69 LAW & CONTEMP. PROBS. 259, 270 n.54 (2006).

3. Despite the name, one's genotype contains no genes and thus reveals no genetic information about the sample's source. *Id.*

4. See NAT'L COMM. FOR THE FUTURE OF DNA EVIDENCE, NAT'L INST. OF JUSTICE, U.S. DEPT OF JUSTICE, *THE FUTURE OF FORENSIC DNA TESTING* 35, 2000 [hereinafter NIJ REPORT], available at <http://www.ncjrs.org/pdffiles1/nij/183697.pdf>.

5. See generally Clare M. Tande, *DNA: A New Investigatory Tool*, 1989 DUKE L.J. 474 (1989). But see COMM. ON IDENTIFYING THE NEEDS OF THE FORENSIC SCIENCE COMTY., *STRENGTHENING FORENSIC SCIENCE IN THE UNITED STATES: A PATH FORWARD* 105 nn.105-06 (Nat'l Acads. Press 2009) (describing how FBI fingerprint experts "matched" prints with "100% certainty" belonging to Brandon Mayfield to prints on plastic bags found at the site of the 2004 Madrid train bombings. After the real source of the prints was arrested, the FBI determined that the mistaken "match" was due to the FBI's lack of a definite number of characteristics required in order to draw a conclusion as to a fingerprint's source).

not be masked by gloves, and is present in even very small samples of blood, saliva, semen, and tissue.⁶ After Virginia passed the nation's first DNA database statute in 1989,⁷ several states followed suit and began collecting and maintaining profiles from crime scenes and those convicted of certain felonies.⁸ Congress's passage of the DNA Identification Act of 1994—part of the Violent Crime Control and Law Enforcement Act of 1994—provided federal legislative authority for the establishment of the Combined DNA Index System (CODIS).⁹

CODIS enables local and state authorities to pool profiles collected from various sources and store them in an accessible manner.¹⁰ The CODIS architecture is a hierarchy of participating laboratories from the local to federal level.¹¹ At the heart of the system is the Local DNA Index System (LDIS), where all profiles originate. These profiles flow into the State DNA Index System (SDIS)—which allows for the interstate exchange of profiles between labs¹²—and the top level National DNA Index System (NDIS), which allows labs “participating in the program to exchange and compare DNA profiles on the national level.”¹³ When CODIS began as a pilot program in 1994, there were only fourteen participating state and local laboratories.¹⁴ Today, over

6. See Tande, *supra* note 5, at 478.

7. Raju Chebium, CNN.com, *Virginia Pioneers Development of DNA Database to Solve Crimes* (Oct. 24, 2000), <http://archives.cnn.com/2000/LAW/10/24/states.dna.virginia.cr>.

8. The trend has been to increase the range of crimes for which a conviction triggers collection as the costs of obtaining and storing of samples and profiles has gone down. Most states initially only collected profiles from those arrested for violent and sexually related felonies, then from all felons, to the current trend of collecting from violent felony arrestees. Tim Shellburg, Presentation, *Legislative Establishment of Comprehensive Forensic DNA Programs* (Oct. 5 2005), <http://www.dnaresource.com/documents/Brasilia2.ppt>.

9. *How Effectively Are State and Federal Agencies Working Together to Implement the Use of New DNA Technologies?: Hearing Before the Subcomm. on Government Efficiency, Financial Management, and Intergovernmental Relations of the H. Comm. on Government Reform, 107th Cong. 50-51 (2001)* (statement of Dwight E. Adams, Deputy Assistant Director, Laboratory Division, FBI), available at <http://bulk.resource.org/gpo.gov/hearings/107h/78050.pdf>.

10. Currently, the FBI lists six sources of DNA profiles: convicted offenders, forensics, arrestees (collected from states that allow the practice and from those arrested for federal crimes), missing persons, unidentified human remains, and biological relatives of missing persons. FBI, *CODIS Brochure* [hereinafter *FBI Brochure*], available at <http://www.fbi.gov/filelink.html?file=hq/lab/pdf/codisbrochure2.pdf>.

11. *Id.*

12. *Id.*

13. *Id.* The NDIS went online in 1998.

14. *Id.*

170 labs across the country and “more than forty labs in over 25 countries use the CODIS software for their own database initiatives.”¹⁵

The benefits of a linked national database are obvious. Matches among the various CODIS indexes can connect crime scenes with suspects thousands of miles away.¹⁶ If the database yields a match, “police from multiple jurisdictions can coordinate their respective investigations and share the leads they developed independently.”¹⁷ As of September 2009, the NDIS contained over 7.4 million profiles in its offender index, over 285,000 profiles collected from crime scenes, and had produced over 95,500 hits.¹⁸ North Carolina has already seen considerable benefit from its participation in CODIS, contributing over 160,000 offender profiles and more than 4100 crime scene samples that have aided over 1100 investigations—including several high profile exonerations.¹⁹

Despite these promising numbers, CODIS and DNA databases have not been without criticism. While law enforcement generally sees the taking of DNA samples as no more intrusive than the routine taking of a fingerprint, civil liberty groups have decried the use of extensive DNA databases. As noted by David Kaye, one of the country’s foremost experts on scientific evidence,

[c]ivil liberties advocates and other commentators decry “unfettered government-sponsored bioinvasion” and worry that DNA data banks will expose “[w]ho I am, my biological potential, my health situation, my paternity, my race, [and the] most profound personal secrets.” The more extreme critics even depict the database statutes as countenanc-

15. *Id.*

16. See, e.g., Alex Tizon, *DNA Leads to Arrest in '93 Death of Local Singer*, SEATTLE TIMES, Jan. 13, 2003 (describing how DNA entered into Florida database led to an arrest and conviction in a Seattle rape and homicide committed ten years prior).

17. FBI Brochure, *supra* note 10.

18. FBI, CODIS-NDIS Statistics, <http://www.fbi.gov/hq/lab/codis/clickmap.htm> (last visited Dec. 14, 2009) [hereinafter FBI Statistics]. But see Richard Willing, *Many DNA Matches Aren't Acted On*, USA TODAY, Nov. 21, 2006, http://www.usatoday.com/news/nation/2006-11-20-dna-matches_x.htm (pointing out that many CODIS laboratories do not keep track of what happens to the information once it is handed over to police and describing instances where police failed to follow up on the CODIS provided leads).

19. See Richard Willing, *Suspects Get Snared by a Relative's DNA*, USA TODAY, June 7, 2005 1A (describing how a DNA database hit exonerated Darryl Hunt after serving eighteen years of a life sentence for the rape and murder of a Winston-Salem newspaper editor); Mandy Locke, *Bittersweet Liberty*, NEWS & OBSERVER (Raleigh), Dec. 9, 2007, at 1A, 18A (describing the exoneration of Dwayne Dail who also served eighteen years of a life sentence for the rape of twelve-year-old girl; the DNA evidence that exonerated Dail revealed the true perpetrator through a database query).

ing medical experimentation on unconsenting human subjects in violation of the Nuremberg Code and basic ethical principles.²⁰

While an in-depth discussion of every legal and policy argument concerning DNA databases is beyond the scope of this Comment, these arguments are typically concerned with one of two perceived threats: (1) that personal health-related information will no longer remain private, or (2) that access to genetic data will be abused—for commercial or even more insidious purposes.

A. *The Perceived Threat to the Privacy of Personal Health Information*

The perceived risk of someone learning personal health information from a law enforcement DNA database is based on a misunderstanding of the nature of the information gleaned from donor DNA samples. It is true that the twisted double-helix of the DNA molecule contains a person's genetic code and can reveal information such as a propensity for conditions such as obesity and heart disease, or even whether a person is likely to develop genetic disorders such as Cystic Fibrosis or Huntington's disease.²¹ However, the DNA profiling procedure employed by law enforcement is capable of revealing none of this genetic information. A brief discussion of DNA and the profiling procedure is necessary to illuminate why fears invasion of personal medical information are largely unfounded.

Without delving too deeply into the complex nature the human genetic code, DNA is made from four basic building blocks: adenine, thymine, cytosine, and guanine (A-T-C-G).²² These four nitrogen bases, linked together in pairs, twist between strips of sugar, ribose, and phosphate groups that make up the molecule's backbone.²³ The resulting double-helix formation can be found within almost every one of the human body's trillions of cells.²⁴ The many possible combinations of linked A, T, C, and G—the “rungs” on the ladder-like structure—make up the genetic “code” that determines one's personal information.²⁵ Roughly three percent of this code is translated into particular ribonucleic acids (RNA) which in turn tell cells to create

20. David H. Kaye, *Two Fallacies About DNA Data Banks for Law Enforcement*, 67 BROOK. L. REV. 179, 181-82 (2001).

21. See NIJ REPORT, *supra* note 4, at 31; Kaye, *supra* note 2, at 264-65.

22. See Tande, *supra* note 5, at 477-78.

23. *Id.*

24. *Id.*

25. *Id.*

certain proteins that cause those cells to exhibit a specific genetic trait such as eye or hair color.²⁶

The vast majority of the DNA molecule—roughly ninety-seven percent—is made up of non-coding regions that convey no genetic information.²⁷ Within these regions, small variations in the way the base pairs repeat are what can reveal someone's identity.²⁸ In forensic DNA testing, typically thirteen different sequences of “short tandem repeats” (STRs) are examined.²⁹ When a suspect's DNA sample is taken—most likely by swabbing a few cells from the inside of the cheek—and analyzed, the resulting patterns are uploaded into CODIS where it is assigned random numbers based on the appearance of the sequences.³⁰ These numbers, similar to social-security numbers, are the only information present in the CODIS database, and the simple matching of a suspect's number with a number obtained from a crime scene is how an offender's profile is linked with a crime.³¹

The information stored in the database is a numerical representation of a section of DNA that tells us nothing more than we can learn from the whorls and ridges of a suspect's fingerprints. Therefore, any risk to the sample donor's privacy is minimal. Invasion of such privacy would almost certainly be the product of abuse or negligence in the system, but as discussed next, this risk seems far outweighed by the enormous benefit DNA databases provide.

B. Abuse of Genetic Data

Some have argued that DNA databases might be abused by employers or insurance companies, and that those parties would deny benefits or coverage to individuals based on some added health risk presented by their genetic data.³² However, as noted by Professor Kaye,

26. J. CRAIG VENTER, *A LIFE DECODED: MY GENOME, MY LIFE* 95 (2007).

27. Derek Regensburger, *DNA Databases and the Fourth Amendment: The Time Has Come to Reexamine the Special Needs Exception to the Warrant Requirement and the Primary Purpose Test*, 19 ALB. L.J. SCI. & TECH. 319, 326 (2009).

28. See Kaye, *supra* note 2, at 270-71.

29. *Id.*

30. D.H. Kaye & Michael E. Smith, *DNA Identification Databases: Legality, Legitimacy, and the Case for Population-Wide Coverage*, 2003 WIS. L. REV. 413, 430-31 (2003).

31. DNA ANALYSIS BACKLOG ELIMINATION ACT OF 2000, H.R. REP. NO. 106-900, pt. 1, at 27 (2000).

32. See, e.g., *Violent Offender DNA Identification Act of 1999, DNA Backlog Elimination Act and Convicted Offender DNA Index System Support Act: Hearing Before the Sub-*

[t]here are no known instances of such disclosure ever having occurred, relatively few documented instances of insurers or employers using anyone's surreptitiously obtained DNA samples, and there are a plethora of laws against genetic discrimination.³³

The possibility that samples will be used in an "Orwellian" manner becomes even more remote because, under the Federal DNA Act, improper disclosure or receipt of DNA profiles carries significant criminal penalties.³⁴ Indeed, along with the statutes that create their DNA databases, most states have also enacted strict penalties for abuse of the data.³⁵

Another remaining abuse concern is that DNA samples may be employed in paternity suits since the type of information extracted can be used to determine ancestry and paternity.³⁶ However, given the amount of stated anonymity delineated above, the concern hardly seems pressing. That this information could be used to determine paternity might even provide further efficiency to the judicial system in that there would be no need for a court order to compel genetic testing in a paternity suit if the donor parent was previously a guest of the state. However, this use of the information is merely hypothetical and legislation forbidding use of the samples obtained through felony arrest or conviction for any paternity purposes would fill that gap.

This only touches upon a few of the numerous aspects of the ongoing debate as to the desirability of DNA profiling and database technology. But, it suffices to say that many of the concerns raised can be and have been minimized or eliminated entirely by a system designed from the outset to protect individual privacy paired with legislation that strongly discourages abuse of the system.

II. A TALE OF TWO STATES

As mentioned above, all fifty states now contribute to CODIS and maintain DNA database profiles of at least some offenders. However, while some states have been receptive to new DNA technology and actively moved to expand database coverage, other states have been

comm. on Crime of the H. Comm. on the Judiciary, 106th Cong. 174-86 (2000) (statement of Barry Steinhardt, Associate Director, ACLU).

33. Kaye, *supra* note 20, at 189.

34. 42 U.S.C. § 14135e(c) (2006) (providing a criminal penalty of not more than \$250,000, or imprisonment of up to a year, or both, for a knowing improper disclosure of a DNA sample).

35. See The American Society of Law, Medicine and Ethics, Statutes Grid (2006), http://www.aslme.org/dna_04/grid/statute_grid_4_5_2006.html.

36. Mark A. Rothstein & Sandra Carnahan, *Legal and Policy Issues in Expanding the Scope of Law Enforcement DNA Data Banks*, 67 BROOK. L. REV. 127, 158-59 (2001).

much slower in passing legislation designed to encourage and grow data banks.

Unfortunately, North Carolina is in the latter category. Although the state established its database in 1993, and began requiring the collection and entry of convict profiles in July of 1994, qualifying offenses were limited to those of a sexual or violent nature.³⁷ This was a step in the right direction, but by limiting the database to include only those offenders that committed a limited class of felonies, the legislature diminished the usefulness of the database.³⁸ In fact, between 2000 and the statute's amendment in 2003 to include profiles from all persons convicted of felony offenses,³⁹ only 950 crime scene and 12,000 offender profiles entered the system.⁴⁰ After the statute's amendment, more than 1900 crime scene and 87,000 offender profiles entered the system between 2003 and 2005.⁴¹

North Carolina's "all felons" amendment was a positive step, but a look to neighboring Virginia shows that much more could have been and remains to be done. The Virginia legislature "was one of the first to recognize the importance of DNA to public safety in the late 1980s and the state has steadily built its DNA program to rank among the finest in the country."⁴² The state has collected profiles from all felony convicts since 1990 and today operates one of the most successful databases in the country.⁴³ By the end of October 2009, the Virginia Department of Forensic Science's database had returned 5677 hits and

37. Act of July 19, 1993, ch. 401, 1993 N.C. Sess. Laws 1453 (including the following qualifying offenses: murder in the first and second degree; first and second degree rape; first and second degree sexual offense; malicious castration; castration or other maiming; malicious maiming; malicious throwing of corrosive acid or alkali; malicious assault in a secret manner; felonious assault with deadly weapon with intent to kill; assaults on handicapped persons; discharging barreled weapon or firearm into occupied property; assault with firearm or other deadly weapon upon law enforcement officer, fireman, or EMS personnel; kidnapping for the purpose of doing serious bodily harm to the person; malicious use of explosive or incendiary; burning of mobile home, manufactured-type house, or recreational trailer home; taking indecent liberties with children; robbery with a dangerous weapon; stalking; common law robbery; and first degree arson).

38. *See id.*

39. N.C. GEN. STAT. § 15A-266.4 (2007). In addition to collection upon felony conviction, profiles are now collected upon conviction for assaults on handicapped persons, stalking, and sexual battery. *Id.*

40. Tim Shellburg, Presentation, DNA Legislative Update (Apr. 11, 2007), <http://www.dnaresource.com/documents/BodePresentation.ppt>.

41. *Id.*

42. NICHOLAS P. LOVRICH ET AL., NATIONAL FORENSIC DNA STUDY REPORT 28 (2003), available at <http://www.ncjrs.gov/pdffiles1/nij/grants/203970.pdf>.

43. *Id.*

contained 299,409 offender profiles.⁴⁴ The agency reports that of those crimes solved or investigations aided, 3524 involved breaking and entering, burglary, grand larceny, or robbery; 4465 were murder investigations; 830 were sex crimes; 583 were “other” offenses; and 23 were classified as murders involving rape.⁴⁵

The larger statistical victory against crime in Virginia compared to North Carolina is almost certainly attributable to Virginia’s early commitment to DNA technology and databases as a means of solving crime. The two states are comparable in terms of geography and demographics.⁴⁶ However, even with a lower crime rate,⁴⁷ Virginia’s database has solved more crimes and collected far more profiles than North Carolina’s.⁴⁸ This numerical disparity can likely be traced back to two sources: North Carolina’s past administrative failures and the aforementioned legislative foot-dragging with regard to database expansion.

A 2003 U.S. Department of Justice commissioned report concerning a national backlog of DNA samples compared North Carolina and Virginia’s database systems and found that Virginia employed six times more analysts than North Carolina.⁴⁹ Additionally, the report noted that while Virginia accepted all samples submitted for analysis, North Carolina only analyzed samples when there was a known suspect.⁵⁰ Despite policies meant to limit the amount of samples tested and investigations aided, North Carolina’s backlog remained a persistent problem: in 2004, more than 6000 rape kits remained unanalyzed.⁵¹

Fortunately, North Carolina has since taken steps to eliminate many of the administrative problems. Through federal funding, it has

44. Virginia Department of Forensic Science, DNA Database Statistics, <http://www.dfs.virginia.gov/statistics/index.cfm> (last visited Nov. 1, 2009).

45. *Id.*

46. North Carolina’s population according to the 2000 U.S. Census was 8,049,313 residents, and Virginia’s was 7,078,515 residents. Compare U.S. CENSUS BUREAU, PROFILES OF GENERAL DEMOGRAPHIC CHARACTERISTICS: NORTH CAROLINA 1 (2000), available at http://www2.census.gov/census_2000/datasets/demographic_profile/North_Carolina/2kh37.pdf, with U.S. CENSUS BUREAU, PROFILES OF GENERAL DEMOGRAPHIC CHARACTERISTICS: VIRGINIA 1 (2000), available at http://www2.census.gov/census_2000/datasets/demographic_profile/Virginia/2kh51.pdf.

47. FBI, Crime in the United States 2007, Table 4, http://www.fbi.gov/ucr/cius2007/data/table_04.html (last visited Sept. 30, 2009).

48. FBI Statistics, *supra* note 18.

49. See LOVRICH ET AL., *supra* note 42, at 28.

50. *Id.*

51. Christopher D. Kirkpatrick, *Charlotte’s DNA Backlog Slows Efforts to Solve Crimes*, CHARLOTTE OBSERVER, Nov. 16, 2008, at A1, available at <http://www.charlotteobserver.com/local/story/356752.html>.

increased the number of analysts to forty-two and drastically reduced the backlog at the state level.⁵² Additionally, it has increased the number of crime labs and expanded facilities in Raleigh and Asheville.⁵³ So while problems still linger, many of the administrative hurdles contributing to the state's lagging database performance have been mitigated or eliminated and the stage is set for the state to take the next step legislatively.

III. ARRESTING DEVELOPMENT

Currently, every state in the country—with the exception of Idaho, Nebraska, and New Hampshire—collects DNA samples from all persons convicted of a felony, regardless of the nature of the crime.⁵⁴ However, as of this article's publication, twenty-one states—including the three states that border North Carolina—have moved to the next phase of database expansion and passed legislation requiring the collection of DNA samples upon felony arrest.⁵⁵ This is a growing trend: in 2008, legislation allowing for DNA collection upon arrest was introduced or carried over from the 2007 session in twenty-two states.⁵⁶ Furthermore, in 2006, the federal government enacted what is likely the most important DNA legislation passed in the last five years when

52. *Id.* (noting that while the backlog problem has been reduced, some backlog does, at least with regard to Charlotte's lab).

53. Cullen Bowder, WRAL.com, State Bureau of Investigation Expands Crime Lab (Sept. 25, 2007), <http://www.wral.com/news/local/story/1861088>.

54. The three remaining states still collect samples for all convicted of violent felonies and burglaries. See Tim Shellburg, Presentation, Forensic DNA Policy: A Global Perspective (Dec. 2, 2008), <http://www.dnaresource.com/documents/Brasilia08.ppt>.

55. See ALASKA STAT. § 44.41.035 (2008) (collecting samples from all felons); ARIZ. REV. STAT. ANN. § 13-610(k) (2009) (murder, sex crimes, burglary); ARK. CODE ANN. § 12-12-1006 (West Supp. 2009) (all felons); CAL. PENAL CODE § 296(c) (2008) (all felons); COLO. REV. STAT. ANN. § 16-23-103 (West Supp. 2009); FLA. STAT. ANN. § 943.325 (West Supp. 2009) (all felons); KAN. STAT. ANN. § 21-2511(e)(1) (2006) (all felons); LA. REV. STAT. ANN. § 15:609(A)(1) (2007) (all felons); MD. CODE ANN., PUBLIC SAFETY § 2-504(3)(i)(1-2) (West 2008) (murder, sex crimes, burglary); MICH. COMP. LAWS ANN. § 28.176 (West Supp. 2009); N.D. CENT. CODE § 31-13-03 (2009) (all felons); N.M. STAT. ANN. § 29-3-10(A) (West 2007) (murder, sex crimes, burglary); S.C. CODE ANN. § 23-3-620 (2009) (all felons); S.D. CODIFIED LAWS § 23-5A-5.2 (2009) (violent felonies); TENN. CODE ANN. § 40-35-319 (Supp. 2008) (violent felonies); TEX. GOV'T CODE ANN. § 41.1471 (Vernon 2007) (murder, sex crimes, burglary); VA. CODE ANN. § 19.2-310.2:1 (2007) (murder and sex crimes); VT. STAT. ANN. tit. 20, § 1932(12)(A) (2009); see also 2009 Ala. Legis. Serv. Act 768 (West) (all felons); 2009 Mo. Laws 359 (all felons).

56. See Gordon Thomas Honeywell Governmental Affairs, 2008 DNA Database Expansion Efforts (Oct. 22, 2008), available at <http://www.dnaresource.com/documents/2008DNAExpansionLegislation.pdf>.

it amended the Violence Against Women Act (VAWA) to allow for the collection of samples from “persons who have been charged in an indictment or information with a crime” and from illegal immigrants taken into custody by the federal government.⁵⁷

A. *Criticism and Challenges*

Passage of this legislation at both the federal and state level has been met with vigorous protest. Citing the inclusion of the DNA from arrestees provision in the VAWA, the ACLU withdrew its support for the bill, and in a letter to the Senate Judiciary Committee, wrote that the provision would violate the Fourth Amendment’s protection against unreasonable search and seizure, harm victims of domestic violence, increase sample backlogs, and “produce an identification system that reflects and possibly exacerbates racially disparate arrest rates.”⁵⁸ The letter additionally cited the collection of private medical information as a basis for the withdrawal of support.⁵⁹

While these are not minor concerns, it must be noted that some degree of guilt is required to keep a person’s profile in a DNA database against their will because most statutes require or allow for the expungement of a profile from the database upon acquittal or dismissal.⁶⁰ Additionally, as stated above, concerns about the dissemination of private medical information and abuse of samples are largely alleviated by the nature of the data collected and laws imposing strict penalties for the misuse of data gleaned from DNA profiles.⁶¹ As to Fourth Amendment challenges, while the Supreme Court has never certified a DNA collection case for deliberation, the First, Second, Sixth, Seventh, Eighth, Ninth, Tenth, and Eleventh Circuits have each rejected Fourth Amendment challenges to the 2004 federal law authorizing the collection of a profile from persons convicted of any felony.⁶² To date, the only federal court to evaluate a Fourth Amendment challenge to col-

57. 42 U.S.C. § 14132 (2006).

58. Letter from Caroline Frederickson, Director, ACLU, to Arlen Specter & Patrick Leahy, Senate Judiciary Committee Members, United States Senate (Sept. 29, 2005), available at <http://www.aclu.org/crimjustice/gen/19885leg20050929.html>.

59. *Id.*

60. See American Society of Law, Medicine & Ethics, Survey of Post-Conviction DNA Statutes (2005), http://www.aslme.org/dna_04/grid/Post-Conviction.html (last visited Nov. 1, 2009).

61. See *supra* Part I.

62. *United States v. Weikert*, 504 F.3d 1 (1st Cir. 2007); *United States v. Amerson*, 483 F.3d 73 (2d Cir. 2007); *Wilson v. Collins*, 517 F.3d 421 (6th Cir. 2006); *United States v. Hook*, 471 F.3d 766 (7th Cir. 2006); *United States v. Kraklio*, 451 F.3d 922 (8th Cir. 2006); *United States v. Kriesel*, 508 F.3d 941 (9th Cir. 2007); *United States v.*

lecting DNA at arrest, a district court, determined that after a judicial or grand jury has determined the existence of probable cause to arrest for a felony, no Fourth Amendment violation is caused by requiring the defendant undergo a mouth swab or blood test for the purposes of DNA analysis for use in law enforcement databases.⁶³

Despite the paucity of federal decisions regarding Fourth Amendment challenges, given the general level of past acceptance of DNA database expansion efforts by federal courts, the question is likely not whether federal courts will uphold the collection of DNA from arrestees, but rather, what Fourth Amendment exception the court will use to justify the practice.⁶⁴

B. *Split in the States*

To date, the practice of collecting DNA from felony-arrestees is batting one for two in state courts. In its 2006 decision, *In re C.T.L.*, the Minnesota Court of Appeals held that the State of Minnesota's post-arrest DNA collection procedure ran afoul of the Fourth Amendment.⁶⁵ The state moved to compel a juvenile defendant, charged with fifth-degree assault and aiding and abetting first-degree aggravated robbery, to appear at the local sheriff's office for the collection of a DNA sample immediately following his initial appearance in district court.⁶⁶ The defendant challenged the statute authorizing DNA collection from persons charged but not convicted as violative of the Fourth Amendment.⁶⁷

In support of its motion to compel the DNA sample, the State argued that the practice was constitutional because collection did not occur until after a magistrate's finding of probable cause.⁶⁸ In rejecting

Banks, 490 F.3d 1178 (10th Cir. 2007); *United States v. Castillo-Lagos*, 147 Fed. App'x. 71 (11th Cir. 2005).

63. *United States v. Pool*, 645 F. Supp. 2d 903 (E.D. Cal. 2009).

64. Discussion of the various Fourth Amendment challenges to collection from arrestees is well-worn territory. See generally Eric May, *Who's Next? The Continued Expansion of DNA Databases in United States v. Kincade*, 43 CRIM. L. BULL. 3 (2007); Tracey Maclin, *Is Obtaining an Arrestee's DNA a Valid Special Needs Search Under the Fourth Amendment? What Should (and Will) the Supreme Court Do?*, 34 J. L. MED. & ETH. 165 (2006); Jacqueline K.S. Lew, *The Next Step in DNA Databank Expansion? The Constitutionality of DNA Sampling of Former Arrestees*, 57 HASTINGS L.J. 199 (2005); D.H. Kaye, *The Constitutionality of DNA Sampling on Arrest*, 10 CORNELL J.L. & PUB. POL'Y 455 (2001).

65. 722 N.W.2d 484, 486 (Minn. Ct. App. 2006).

66. *Id.* at 486.

67. *Id.*

68. *Id.* at 490.

this argument, the court's analysis first turned to the United States Supreme Court decision in *Skinner v. Railway Labor Executives' Ass'n* for the proposition that "the collection and subsequent analysis of . . . biological samples must be deemed Fourth Amendment searches."⁶⁹ It then discussed in some depth the court's decision in *Schmerber v. California*, a case concerning the taking of a blood sample without a warrant to determine whether the suspect was intoxicated.⁷⁰ The *Schmerber* court determined that taking the blood sample was indeed a search, but that it was appropriate as the alcohol in the suspect's system would have dissipated in the time necessary to obtain a warrant.⁷¹ From this, the Minnesota Court of Appeals determined "that establishing probable cause to arrest a person is not, by itself, sufficient to permit a biological specimen to be taken from the person without first obtaining a search warrant."⁷² By the court's rationale, because the Minnesota statute required the collection of DNA upon determination of probable cause to arrest, the statute did away with the constitutional requirement that there be a fair probability that the search would result in evidence of a crime.⁷³

Supported by numerous federal court decisions upholding the constitutionality of collecting DNA samples from convicted felons, the state next argued that the court should weigh the defendant's privacy rights against those of the state in collecting and storing DNA.⁷⁴ However, the court of appeals rejected this argument as well, pointing out that the Fourth Amendment privacy interests afforded those convicted of a crime were significantly less than those held by persons merely charged.⁷⁵

In 2007, the Supreme Court of Virginia came to the opposite conclusion, determining that the collection of DNA from arrestees was "minimally intrusive" and constitutionally permissible. In *Anderson v. Commonwealth*, the 2003 arrest of Angel Anderson for rape and sodomy required the taking of his DNA profile for entry into the state arrestee database.⁷⁶ The profile matched up with a 1991 rape investigation and ultimately led to Anderson's conviction for the older

69. *Id.* at 488 (quoting *Skinner v. Ry. Labor Executives' Ass'n*, 489 U.S. 602, 618 (1989)).

70. *Id.* at 488-89.

71. *Id.* at 89.

72. *Id.* at 490.

73. *Id.* at 490-91.

74. *Id.*

75. *Id.*

76. *Anderson v. Commonwealth*, 650 S.E.2d 702, 704 (Va. 2007).

offense.⁷⁷ Anderson's argument to the Virginia Supreme Court was that the taking of the DNA sample constituted a "suspicionless seizure" and that "the evidence flowing from such a search must be suppressed as the 'fruit of a poisonous tree.'"⁷⁸ The defendant first pointed to the Supreme Court's decision in *City of Indianapolis v. Edmond*,⁷⁹ a case holding that checkpoint stops "can only be justified by some quantum of individualized suspicion."⁸⁰ Anderson also cited *Ferguson v. City of Charleston*, where the Supreme Court analyzed a program between police and a hospital to test pregnant women for drug use under the "special needs" exception to the Fourth Amendment for the proposition that "searches conducted for general law enforcement purposes cannot be excepted from the requirements of probable cause."⁸¹

The Virginia court's rejection of *Edmonds* and *Ferguson* as a bar to taking DNA from an arrestee was based on the strong similarity between fingerprints and DNA profiles. Drawing on its prior case law concerning the taking of samples from convicts, the court concluded that

the minor intrusion caused by the taking of a DNA sample is outweighed by Virginia's interest . . . in determining inmates identification characteristics specific to the person for improved law enforcement. . . . [W]e hold that the taking of Anderson's DNA sample upon arrest . . . is analogous to the taking of a suspect's fingerprints upon arrest and is not an unlawful search under the Fourth Amendment.⁸²

The United States Supreme Court denied Anderson's petition for certiorari.⁸³

These two decisions underscore the importance of how the nature of the sample collected is characterized. The Minnesota Court of Appeals saw the DNA sample as a piece of personal information that could be wrested from the defendant's grasp only once their reasonable expectation of privacy was reduced the lowest level possible, whereas the Virginia court viewed the sample as merely another means of identifying a suspect in custody. As explained below, public policy is probably best served if the Virginia court's view prevails.

77. *Id.*

78. *Id.* at 706. But as the court noted, "it is more appropriately referred to as a 'search.'" *Id.*

79. 531 U.S. 31, 73 (2000).

80. *Anderson*, 650 S.E.2d at 706 (quoting *Edmond*, 531 U.S. at 47).

81. *Id.* at 706 (citing *Ferguson v. City of Charleston*, 532 U.S. 67, 69-73 (2001)).

82. *Id.* (original alteration omitted) (internal quotation marks omitted) (citations omitted).

83. *Anderson v. Virginia*, 128 S. Ct. 2473 (2008).

C. *The Benefits of Obtaining DNA Samples at Arrest*

The benefits of taking DNA from suspects arrested for at least violent felonies greatly outweigh the risks. Virginia, which has maintained its arrestee index only since 2003 and limits collection to persons arrested for homicide and sex-related crimes, attributes over 500 database hits to its arrestee database since its inception.⁸⁴ However, the benefits of collection on arrest are best illustrated not by cold statistics, but rather by real situations where the practice could have prevented violent crimes had DNA been taken when offenders were arrested.

In December of 1999, a man with a knife kidnapped a seventeen-year-old girl as she waited for a Chicago city bus, then led her to an abandoned building and raped her.⁸⁵ A DNA sample was taken, but the sample did not match any database profiles.⁸⁶ Nine months later, Brandon Harris was arrested for an unrelated aggravated criminal sexual assault, and again two months later for the same charge.⁸⁷ Since Illinois did not have legislation requiring a DNA sample from felony arrestees, no sample was taken when he was booked.⁸⁸ Months later, he was eventually found guilty of the rape of the girl at the bus stop as well as four additional rapes, armed robbery, and aggravated kidnapping—all of which took place after his arrest in August of 2000.⁸⁹ Had a DNA profile been taken when Harris was arrested, it would have matched the crime scene profile already on record from the earlier rape and his subsequent violent crimes would have likely been prevented.

In February of 1999, Mario Villa was arrested for felony burglary.⁹⁰ Once again, the state required no DNA sample be taken at arrest—though it was likely the practice to take photos and fingerprints as part of the booking process. Five months later, Villa crept into the apartment of a sleeping sixteen-year-old-girl and raped her.⁹¹ Despite his forcing her to take a shower, police were able to obtain a

84. Virginia.gov, DNA Database Statistics, <http://www.dfs.virginia.gov/statistics/index.cfm> (last visited Oct. 10, 2009).

85. CITY OF CHICAGO, CASE STUDY OF SERIAL KILLERS AND RAPISTS: 60 VIOLENT CRIMES COULD HAVE BEEN PREVENTED INCLUDING 53 MURDERS AND RAPES 5 (2005), available at <http://www.katieslaw.org/chicago.dna.study.doc>.

86. *Id.*

87. *Id.*

88. *Id.*

89. *Id.* at 6.

90. *Id.* at 10.

91. *Id.*

DNA sample from her person.⁹² In May 2002, Villa entered the apartment of a thirty-two-year-old woman and raped her.⁹³ Again, he forced the woman to take a shower, but a viable DNA sample was recovered.⁹⁴ In March of 2003, he forced a forty-two-year-old woman from her car and into the woods where she was raped.⁹⁵ In total, Villa raped or attempted to rape nine women after he was arrested for burglary.⁹⁶ Had the police taken a DNA sample when Villa was arrested for burglary, he would have been identified after the first rape, and eight rapes might have been prevented.

Unfortunately, stories such as the two outlined above are not uncommon in jurisdictions all over the country; many of the legislative acts granting police authority to collect DNA from arrestees bear the names of victims whose deaths might have been prevented had such a law been in place.⁹⁷ The source of the above two anecdotes, a 2005 study on preventable crime prepared by the City of Chicago, examined eight offenders, and found that if DNA had been taken when the men were arrested, twenty-two murders, thirty rapes, and many attempted rapes and kidnappings could have been prevented.⁹⁸ The eight offenders were arrested a total of twenty-one times before the link was made to the violent offenses.⁹⁹ A Maryland study that examined only three offenders came to a similar conclusion: twenty crimes could have been prevented had a DNA sample been required at arrest.¹⁰⁰

92. *Id.*

93. *Id.*

94. *Id.*

95. *Id.*

96. *Id.* at 11.

97. For example, New Mexico's "Katie's Law" is named after twenty-two-year-old Katie Sepich, a college student whose rape and murder might have been prevented as her attacker had been arrested many times before. Similar stories surround the passing of "Juli's Law" (Oklahoma) and the "Johnia Berry Act" (Tennessee). See DNA Saves, Stories, <http://www.dnasaves.org/stories.php> (last visited Mar. 1, 2009).

98. CITY OF CHICAGO, CHICAGO'S STUDY ON PREVENTABLE CRIMES I (2005), available at <http://www.dnasaves.org/files/ChicagoPreventableCrimes.pdf>.

99. *Id.*

100. MARYLAND STATISTICAL ANALYSIS CENTER, MARYLAND STUDY ON PREVENTABLE CRIMES I (2008), available at http://www.dnasaves.org/files/MarylandDNAarrestee_study.pdf. As one commentator explained,

When a crime's true perpetrator is not identified, communities are less safe: among the first 241 post-conviction DNA exonerations nationwide, the real perpetrators were identified in 105 cases. In many of those cases, the real perpetrator had gone on to commit additional violent crimes while an innocent person was in prison. These perpetrators were convicted of at least 90 serious, violent crimes—including 56 rapes and 19 murders—that they committed after innocent people were convicted for their earlier crimes. Many

Collecting DNA when someone is arrested for a felony, rather than waiting until conviction, not only solves crimes faster but also prevents crimes from ever happening. The studies and statistics from states that have implemented these laws—and the regrets of states that have not—affirm what common sense should have already told us: the more samples in the database, the more effective the system is for solving and preventing crimes. It is time North Carolina takes this logical step and starts collecting DNA from all felony arrestees.

IV. NORTH CAROLINA SHOULD COLLECT DNA FROM FELONY ARRESTEES

The idea that North Carolina should collect DNA from arrestees is not new. The state has flirted with passing the necessary legislation for years, but has never made a serious commitment to expand the database. Bills introduced in the North Carolina Senate as far back as 1999 and as recently as 2009 would have required the collection of samples from all violent felony arrestees, but the legislation has died at the committee level each time.¹⁰¹ With support from both sides of the aisle in both the General Assembly's House and Senate, the state's hesitation to enact an arrestee collection statute is likely attributable to fiscal and administrative concerns. However, given the recent strides taken in eliminating sample backlogs,¹⁰² a large pool of federal funding for DNA databases, and evidence of the overwhelming fiscal *benefit* of arrestee DNA collection legislation, the time is ripe for expansion.

A. Cost Savings

Arrestee legislation will save North Carolina money. While not immediately obvious, crime reduction provides real fiscal benefits. The North Carolina Governor's recommended budget for 2007-09

more were implicated in violent crimes but were never convicted because the statute of limitations on the crime had run out. Each one of these rapes, murders and other violent crimes could have been prevented if law enforcement had the tools to identify the correct suspect in the first place.

Peter Neufeld, Co-Director, National Innocence Project, Testimony Before the Senate Judiciary Committee 2 (Sept. 9, 2009), *available at* <http://judiciary.senate.gov/pdf/09-09-09%20Neufeld%20testimony.pdf>.

101. S.B. 165, 1999 Gen. Assem., Reg. Sess. (N.C. 1999); S.B. 95, 2001 Gen. Assem., Reg. Sess. (N.C. 2001); S.B. 11, 2003 Gen. Assem., Reg. Sess. (N.C. 2003); S.B. 2015, 2005 Gen. Assem., Reg. Sess. (N.C. 2005); S.B. 746, 2005 Gen. Assem., Reg. Sess. (N.C. 2006); S.B. 1003, 2007 Gen. Assem., Reg. Sess. (N.C. 2007); H.B. 1697, 2007 Gen. Assem., Reg. Sess. (N.C. 2007); H.B. 1403, 2009 Gen. Assem., Reg. Sess. (N.C. 2009).

102. See Kirkpatrick, *supra* note 51, at A1.

included over \$423 million in spending for judicial services and public safety.¹⁰³ Fiscal notes prepared by the General Assembly's Fiscal Research Division have estimated the likely cost of collecting DNA from felony arrestees to be somewhere in the area of \$3.5 to \$4.1 million annually.¹⁰⁴ According to the legislature's numbers, this money would go toward the hiring of additional DNA analysts, contractual agreements with private laboratories, training staff and police officers, additional office space, and materials such as oral swab kits, computers, and other scientific equipment.¹⁰⁵ It can certainly be argued that with the state facing an extended economic crisis and enormous budget cuts, now is not the best time to tack an additional four million dollars onto the already strapped budget. However, the state would likely receive a complete return on its investment in an expanded database and reap significant financial gains in a relatively short amount of time.

An expanded DNA database would directly save the state money by reducing (1) the cost of investigating crimes and (2) the number of crimes investigated.¹⁰⁶ Without even accounting for reductions in investigation costs, an Indiana study estimated that by collecting DNA from felony arrestees, the State of Indiana could save more than sixty million dollars per year.¹⁰⁷ The basis for this estimate can be found in the recidivist nature of most criminals.

There is a reason why society refers to some as "career" criminals. According to prisoner polls and other data collected by both the United Kingdom and the National Institute for Justice (NIJ), every conviction obtained because of DNA results in avoiding 7.4 to 7.8 additional crimes.¹⁰⁸ According to the U.S. Bureau of Justice Statistics, in 2002, "fifty-three percent of jail inmates were on probation, parole or

103. N.C. OFFICE OF STATE BUDGET AND MGMT., OFFICE OF THE GOVERNOR, 2007-2009 RECOMMENDED OPERATING BUDGET WITH RESULTS-BASED INFORMATION 2 (2007), available at http://www.osbm.state.nc.us/files/pdf_files/bgt0709v4r.pdf.

104. See N.C. GEN. ASSEM. FISCAL RESEARCH DIV., LEGISLATIVE FISCAL NOTE: HOUSE BILL 1697 (FIRST EDITION) 1 (2007), available at <http://www.ncga.state.nc.us/Sessions/2007/FiscalNotes/House/PDF/HFN1697v1.pdf>; N.C. GEN. ASSEM. FISCAL RESEARCH DIV., LEGISLATIVE FISCAL NOTE: HOUSE BILL 1403 (FIRST EDITION) 1 (2009), available at <http://www.ncga.state.nc.us/Sessions/2009/FiscalNotes/House/PDF/HFN1403v1.pdf>.

105. *Id.* at 2.

106. JAY SIEGEL & SUSAN D. NARVESON, WHY ARRESTEE LEGISLATION CAN SAVE INDIANA TAXPAYERS OVER \$60 MILLION PER YEAR 7 (2009), http://www.dnasaves.org/files/IN_DNA_Cost_Savings_Study.pdf.

107. *Id.* at 1.

108. *Id.* at 7.

pretrial release at the time of arrest, four in ten inmates had a current or past sentence for a violent offense, and thirty-nine percent had served three or more sentences prior to incarceration or probation.”¹⁰⁹ Put succinctly, these numbers tell us what most people already know: people that commit one crime are more likely to have committed another.

Historically, DNA has been used mostly to aid investigations of violent crime. This makes sense because the nature of the crimes increases the likelihood of recovering biological material, and because law enforcement has limited resources available to collect and process samples. As noted *supra*, North Carolina has struggled with just such a resource problem, and has only recently managed to address its backlog of violent crime samples.¹¹⁰ However, when considering whether it would be cost prohibitive to collect DNA samples from all arrestees, or only when the arrest is for a violent offense, legislators would do well to consider how an expanded DNA database might also aid in solving the state’s property crimes.

Property crimes are typically the hardest to solve, and enjoy a much lower clearance rate when compared to the violent offenses tracked by the North Carolina SBI.¹¹¹ Property crimes simply do not avail themselves of investigation—unless a criminal is caught in the act, police often have very little evidence to go on. The motives for these crimes are usually impersonal, and particularly with regard to burglaries of homes and businesses, the payoff generally outweighs the risk of detection. It was these types of concerns that led the city of Denver, Colorado to evaluate the cost-effectiveness of using DNA evidence to solve property crimes, particularly with regard to residential burglaries.¹¹² During the study period between October 2005 and September 2007, the City and County of Denver had a combined monthly average of roughly 500 burglaries, with about six percent

109. U.S. Dep’t of Justice Statistics, Criminal Offender Statistics, <http://www.ojp.usdoj.gov/bjs/crimoff.htm> (last visited Mar. 1, 2009).

110. See Kirkpatrick, *supra* note 51, at A1.

111. The clearance rate for burglary in 2008 was 17.5%, compared to 80.2% for murder and 64% for rape. SBI, Index Offenses and Clearances Statewide, Including Simple Assaults, Arson, and Officer Assaults, <http://sbi2.jus.state.nc.us/crp/public/Default.htm>. The overall clearance rate for property crime was 23.3% while violent crimes were cleared at a reported rate of 54.4%. *Id.*

112. Simon Ashikhmin et al., *Using DNA to Solve High-Volume Property Crimes in Denver: Saving Money, Lowering Crime Rates and Making Denver Safer*, 43 THE PROSECUTOR 34 (2008), http://www.denverda.org/DNA_Documents/Denver%20Burg%20Project%20NDAA.pdf.

yielding testable material.¹¹³ Of the 600 profiles ultimately uploaded to CODIS, the system returned 245 hits, 234 of which resulted in filed cases.¹¹⁴ Of those, the sole means of identifying the perpetrator was the DNA profile.¹¹⁵

Those numbers might not seem overwhelming, but catching these career criminals whose backgrounds warranted longer prison sentences meant that these few arrests resulted in a precipitous drop in the area's property crime rate.¹¹⁶ Relevant to the discussion of costs, the study concluded that every dollar spent on DNA testing in this context yielded more than ninety dollars in savings because of the removal of habitual offenders and the resulting reduction in investigation costs.¹¹⁷ Although this study focused more on crime scene collection as a way of expanding DNA databases (as opposed to collection of initial samples from arrestees), it demonstrates the cost-effectiveness that can accompany expanded collection and focus on habitual offenders.

If we assume, per the above-referenced Indiana study, that it costs \$2000 to pay for officer response, investigation, prosecution, and adjudication, and that seven offenses are prevented for each conviction obtained,¹¹⁸ then expansion of North Carolina's DNA database would need to assist in roughly 300 convictions in order to pay for the extra estimated expense.¹¹⁹ This figure is likely conservative as it does not account for the obvious cost savings (as they did in Denver) that DNA databases provide by shortening and aiding investigations, the social benefits of reduced crime, and the costs born by victims. Assisting in 300 convictions hardly seems implausible as the North Carolina Department of Justice's most conservative estimate forecasts the proposed expansion would add an additional 80,000 samples to the database annually.¹²⁰

In fact, the prevented cost to victims makes possibly the best economic case for an expanded database. A 1996 NIJ study estimated the

113. *Id.* at 35.

114. *Id.*

115. *Id.*

116. *Id.* As an example of the impact prosecuting just a few offenders can have on local crime rates, the study discusses a particular case where a husband and wife were identified from the same cigarette butt at the crime scene. After they were sentenced to lengthy prison terms, the burglary rate in the area fell by forty percent. *Id.* at 38.

117. *Id.* at 35.

118. See SIEGEL & NARVESON, *supra* note 106, at 7.

119. Assumes an annual cost of \$4,000,000 divided by the product of \$2000 cost per reported crime multiplied by 7 avoided crimes.

120. See sources cited *supra* note 104.

cost to victims of personal crimes in America to be “\$105 billion annually in medical costs, lost earnings, and public program costs related to victim assistance.”¹²¹ When less tangible costs such as pain and suffering and reduced quality of life were figured in, the total jumped to an estimated \$450 billion.¹²² Of those offenses included in the study, the crime most costly to victims—and likely one of the most represented offenses in DNA databases¹²³—was rape, costing someone victimized an average of \$87,000.¹²⁴ If the NIJ’s figure is accurate, then North Carolina’s 2239 reported rapes in 2008¹²⁵ represented a total cost to victims of \$194,793,000. If victim pain and suffering is removed from the equation, and only the medical costs incurred per rape victim (\$5100) is taken into account, victims of rape still spent more than an estimated eleven million dollars in 2008.¹²⁶ Assuming an annual cost of four million dollars, the database expansion would only have to assist in forty-seven rape cases each year to pay for itself without accounting for the crimes that those convictions would later prevent.

These numbers indicate that by spending the projected four million dollars, the state could save itself and the victims of crimes many millions of dollars. In the face of this data, it becomes clear that North Carolina cannot afford *not* to expand its database to include arrestees. The savings the state and its people would reap for this investment in its safety would repay itself many times over.

121. NATIONAL INSTITUTE OF JUSTICE, VICTIM COSTS AND CONSEQUENCES: A NEW LOOK 1 (1996) [hereinafter VICTIM STUDY], available at <http://www.ncjrs.gov/pdffiles/victimcost.pdf>.

122. *Id.*

123. While figures as to the makeup of North Carolina’s database are unavailable, of the first 1000 profiles entered into New York’s database, a majority 750 profiles were related to sex crime investigations. See New York Division of Criminal Justice Services, New York State DNA Databank Breakdown of Investigations Added, <http://criminaljustice.state.ny.us/forensic/typesofcrimesfirst1000hits.htm> (last visited Sept. 30, 2009).

124. See VICTIM STUDY, *supra* note 121, at 1.

125. STATE BUREAU OF INVESTIGATION, N.C. DEP’T OF JUSTICE, CRIME IN NORTH CAROLINA: ANNUAL SUMMARY REPORT OF 2008 UNIFORM CRIME REPORTING DATA 2 (2009), available at <http://sbi2.jus.state.nc.us/crp/public/Default.htm> (follow “2008 Annual Summary Report” hyperlink).

126. See VICTIM STUDY, *supra* note 121, at 1 (reflecting figures as computed in 1996, which are undoubtedly much higher today due to the rise in the cost of healthcare).

B. *Potential Funding*

In 2004, then-President Bush proposed spending more than one billion dollars as part of his “DNA initiative.” The initiative’s goal was and still is

[to] [p]rotect crime victims’ rights, eliminate the substantial backlog of DNA samples collected from crime scenes and convicted offenders, to improve and expand the DNA testing capacity of Federal, State, and local crime laboratories, to increase research and development of new DNA testing technologies, to develop new training programs regarding the collection and use of DNA evidence, to provide post-conviction testing of DNA evidence to exonerate the innocent, to improve the performance of counsel in State capital cases, and for other purposes.¹²⁷

Since the initiative began, the federal government has distributed more than \$330 million through the Forensic DNA Backlog Reduction Program, of which North Carolina received over \$9.6 million through 2009.¹²⁸ The expense of expanding the state’s DNA database can likely be partially, if not fully, offset by federal funding. Given the money the state could *save* by expanding the database—along with the obvious public safety benefits of expansion to include arrestees—the North Carolina legislature should move to pass an appropriate collection statute at the first opportunity.

CONCLUSION

In a recent congressionally-commissioned report regarding the state of forensic evidence, the National Academy of Sciences found that, “[w]ith the exception of nuclear DNA analysis . . . no forensic method has been rigorously shown to have the capacity to consistently, and with a high degree of certainty, demonstrate a connection between evidence and a specific individual or source.”¹²⁹ This means that among the various types of forensic evidence, including finger, palm, footprints, bite marks, forensic anthropology, toxicology, and a host of other methods and procedures used to bring criminals to justice, DNA is by far the best and most reliable.

North Carolina has consistently lagged behind neighboring states—and indeed much of country—in making the most of its DNA database to bring criminals to justice and to make communities safer. However, roughly a week after the General Assembly wrapped up a

127. Justice for All Act of 2004, Pub. L. No. 108-405, 118 Stat. 2260.

128. DNA Initiative, Backlog Reduction Funding: 2004-2009, <http://www.dna.gov/funding/backlog-reduction/backlog-reduction-funding> (last visited Nov. 25, 2009).

129. COMMITTEE ON IDENTIFYING THE NEEDS OF THE FORENSIC SCIENCE COMMUNITY, STRENGTHENING FORENSIC SCIENCE IN THE UNITED STATES: A PATH FORWARD 7 (2009).

contentious budget debate and adjourned the 2009 session, State Attorney General Roy Cooper announced he would submit a proposal that North Carolina join the growing number of states that collect samples from felony arrestees for consideration in the next legislative session.¹³⁰ Despite certain opposition from civil-liberty groups and other privacy advocates, North Carolina's lawmakers should be urged to give the Attorney General's proposal serious consideration. As outlined here, DNA databases are designed in such a way that the potential gains from expanding North Carolina's system far outweigh the risks, and it is therefore time that North Carolina took this bold step forward.

John Maddux

130. Mark Binker, *Get DNA Samples on Arrest*, NEWS & RECORD (Greensboro, N.C.), Jul. 27, 2009, available at http://www.news-record.com/content/2009/07/27/article/cooper_wants_more_dna_collection.

