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## Constitutional Law—The Fourth Amendment Challenge to DNA Sampling of Arrestees Pursuant to the Justice for All Act of 2004: A Proposed Modification to the Traditional Fourth Amendment Test of Reasonableness

Kimberly A. Polanco

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CONSTITUTIONAL LAW—THE FOURTH AMENDMENT CHALLENGE TO  
DNA SAMPLING OF ARRESTEES PURSUANT TO THE JUSTICE FOR ALL ACT  
OF 2004: A PROPOSED MODIFICATION TO THE TRADITIONAL FOURTH  
AMENDMENT TEST OF REASONABLENESS.

I. INTRODUCTION

Deoxyribonucleic Acid (DNA) is one's genetic "blue print" of life.<sup>1</sup> It is unique to every individual in much the same way as a fingerprint is unique.<sup>2</sup> Because of DNA's ability to identify and distinguish among individuals, many have labeled a DNA profile as a "genetic fingerprint."<sup>3</sup> Like fingerprints, law enforcement has integrated DNA technology into the criminal investigation process so that it is now used as a tool for suspect identification.<sup>4</sup> In recognizing the important role DNA plays in solving crimes accurately and effectively, Congress enacted the DNA Act of 1994,<sup>5</sup> which authorized the Federal Bureau of Investigation (FBI) to establish a Combined DNA Index System (CODIS) to serve as a comprehensive database that stores DNA profiles of convicted offenders from across the nation.<sup>6</sup> The CODIS program facilitates an electronic exchange of DNA profiles collected from crime scenes and convicted offenders from all fifty states.<sup>7</sup> By comparing DNA evidence collected from crime scenes to DNA profiles in the database, law enforcement organizations from various parts of the country can assist each other in solving crimes and locating offenders.<sup>8</sup> Thus far, CODIS has proven to be a powerful law enforcement tool.<sup>9</sup>

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1. Hugh Miller III, *DNA Blueprints, Personhood, and Genetic Privacy*, 8 HEALTH MATRIX 179, 187–88 (1998) (listing the extraordinary amount of information that may be revealed through an analysis of one's DNA).

2. David F. Betsch P.h.D., *DNA Fingerprinting in Human Health and Society*, at [http://www.accessexcellence.org/AB/BA/DNA\\_Fingerprinting\\_Basics.html](http://www.accessexcellence.org/AB/BA/DNA_Fingerprinting_Basics.html) (last visited Feb. 19, 2005).

3. See, e.g., LEXICON EncycloBio, at [http://www.lexicon-biology.com/biology/definition\\_54.html](http://www.lexicon-biology.com/biology/definition_54.html) (last visited Feb. 19, 2005) (defining the analysis of a DNA sequence as "genetic fingerprinting"); Andrea de Gorgey, *The Advent of DNA Databanks: Implications for Information Privacy*, 16 AM. J. L. & MED. 381, 381 (1990) (commenting that DNA identification tests have been heralded as the "fingerprint of the future"); Fred W. Drobner, *Comment, DNA Dragnets: Constitutional Aspects of Mass DNA Identification Testing*, 28 CAP. U. L. REV. 479, 480 (2000) (noting that DNA profiling is also referred to as "DNA fingerprinting").

4. Betsch, *supra* note 2.

5. 42 U.S.C. § 14132 (2004).

6. Fed. Bureau of Investigation, The FBI's Combined DNA Index System, *Mission Statement and Background*, at <http://www.fbi.gov/hq/lab/codis/program.htm> (last visited Feb. 19, 2005).

7. *Id.*

8. *Id.* When DNA is obtained at a crime scene, the forensic examiner sends the evidence to the appropriate federal authorities to search for an instantaneous match in the database. United States Dep't of Justice. Fed. Bureau of Investigation, *The FBI's DNA and DNA Databasing Initiatives*, Oct. 2000, at <http://www.fbi.gov/hq/lab/codis/fbidna.pdf> (last visited

The amount of time and money the government has invested and plans to invest in the system demonstrates the degree of confidence the government has in the CODIS database.<sup>10</sup>

To capitalize on CODIS's potential, every state has enacted statutes that require submission of DNA samples from individuals convicted of qualifying offenses.<sup>11</sup> Each state is responsible for determining the categories of convicted offenders subject to compulsory DNA sampling.<sup>12</sup> Since the implementation of CODIS, the categories of DNA profiles that may be uploaded into the database have been restricted to only those individuals actually convicted of qualifying offenses.<sup>13</sup> State database laws, however,

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Feb. 19, 2005) [hereinafter *DNA Databasing Initiatives*]. The following excerpt taken from the testimony of Dwight E. Adams, Assistant Director, Laboratory Division, FBI, before the Senate Judiciary Committee, subcommittee on Crime and Drugs (May 14, 2002), at <http://www.fbi.gov/congress/congress02/adams051402.htm> illustrates the practical application of CODIS:

For example, a DNA profile of a suspected perpetrator is developed from the sexual assault evidence kit. If there is no suspect in the case or if the suspect's DNA profile does not match that of the evidence, the laboratory will search the DNA profile against the Convicted Offender Index. If there is a match in the Convicted Offender Index, the laboratory will obtain the identity of the suspected perpetrator. If there is no match in the Convicted Offender Index, the DNA profile is searched against the crime scene DNA profiles contained in the Forensic Index. If there is a match in the Forensic Index, the laboratory has linked two or more crimes together and the law enforcement agencies involved in the cases are able to pool the information obtained on each of the cases. Matches made by CODIS and confirmed by the participating laboratories are often referred to as CODIS "hits."

9. Fed. Bureau of Investigation, The FBI's Combined DNA Index System, *Investigations Aided*, at <http://www.fbi.gov/hq/lab/codis/aidedmap.htm> (last visited Feb. 19, 2005). The FBI measures the success of the CODIS program by counting the number of cases it helps solve. *Id.* Cases are solved each time CODIS produces "cold hits," which are defined as DNA matches that provide the police with an investigative lead that would not have been developed but for the assistance of the database. *Id.* As of December 2004, CODIS has aided in the investigation of 20,788 cases. *Id.*

10. Between 1996 and 2000, Congress allocated \$25,000,000 to the FBI to carry out the goals of the DNA Identification Act of 1994. 42 U.S.C. § 14134 (2004). Between 2001 and 2004, Congress allocated \$170,000,000 in grant funding to the states for carrying out the DNA Backlog Elimination Act of 2000. 42 U.S.C. § 14135(j) (2000). Furthermore, the Justice for All Act of 2004 creates the Debbie Smith Act of 2004 which authorizes \$151 million each year from FY 2005 through FY 2009. 42 U.S.C. § 14135(j) (2005).

11. See Robin Cheryl Miller, *Annotation, Validity, Construction, and Operation of State DNA Database Statutes*, 76 A.L.R.5th 239 (2004).

12. 42 U.S.C. § 14135(b) (2004) (For a state to be eligible for funding to collect DNA samples for inclusion in CODIS, "the chief executive officer of the State shall submit to the Attorney General an application in such form and containing such information as the Attorney General may require. The application shall. . . (3) include a certification that the State has determined, by statute, rule, or regulation, those offenses under State law that shall be treated for purposes of this section as qualifying State offenses . . .") *Id.*

13. 42 U.S.C. § 14132(a)(1) (2004) (explaining that while states may collect DNA

are being expanded each legislative session to include additional categories of DNA data, such as the DNA profiles of persons merely arrested or indicted for specific offenses.<sup>14</sup>

However beneficial the CODIS database may be to law enforcement, generating DNA profiles for use in a forensic DNA database results in a loss of privacy for many individuals.<sup>15</sup> As a result, state and federal DNA laws requiring offenders to submit to DNA sampling have been challenged as unconstitutional.<sup>16</sup> Specifically, some challenge DNA databases as violative of the Fourth Amendment in so far as compelled DNA sampling on convicted offenders amounts to an unreasonable search.<sup>17</sup>

The federal government's most recent legislative effort to improve the criminal justice system through DNA technology only heightens Fourth Amendment privacy concerns.<sup>18</sup> On Saturday October 30, 2004, President

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samples from a variety of individuals, only "convicted offender" profiles may be uploaded into CODIS). Smith Alling Lane is a public services corporation that provides governmental affairs services to Applied Biosystems, and as part of its service, Smith Alling Lane generates reports on federal and state DNA legislation. Smith Alling Lane, *DNA Resource*, at <http://www.dnaresource.com> (last visited Feb. 19, 2005). A comprehensive report of state DNA database laws and qualifying offenses is at [http://www.dnaresource.com/bill\\_tracking\\_list.htm](http://www.dnaresource.com/bill_tracking_list.htm) (last visited Apr. 30, 2005).

14. Smith Alling Lane, DNA Resource, 2004 Legislative Session, *DNA Database Expansion*, at <http://www.dnaresource.com/2004%20DNA%20Expansion%20bills.pdf> (last visited Feb. 19, 2005); see also Nat'l Pub. Radio, All Things Considered, Critics Raise Privacy Concerns over DNA Database (Nov. 16, 2004), at <http://www.npr.org/templates/story/story.php?storyId=4173172> (last visited Feb. 19, 2004) (discussing the recent passage of Proposition 69 which authorizes California law enforcement authorities to collect a DNA sample with a mouth swab from arrestees at the time of arrest for contribution to California's DNA database).

15. See, e.g., Christine Rosen, *Liberty, Privacy, and DNA Databases*, THE NEW ATLANTIS (Spring 2003), available at <http://www.thenewatlantis.com/archive/1/rosenprint.htm> (last visited Feb. 19, 2005) (arguing that the increasing threat to civil liberties imposed by the existence of DNA databanks outweighs any benefit derived from state and federal DNA database laws which provide for compulsory DNA sampling); Andrew C., Bernasconi, *Beyond Fingerprinting: Indicting DNA Threatens Criminal Defendants' Constitutional and Statutory Rights*, 50 AM. U.L. REV. 979 (2001) (arguing that the advent of DNA database might violate criminal defendants' statutory and constitutional rights).

16. See, e.g., *United States v. Kincade*, 379 F.3d 813 (9th Cir. 2004); *Groceman v. United States Dep't of Justice*, 354 F.3d 411 (5th Cir. 2004); *United States v. Stegman*, 295 F. Supp. 2d 542 (D. Md. 2003); *Polson v. State*, No. CR04-651, 2005 LEXIS 36 (Ark. Jan. 20, 2005); *State v. Hauge*, 79 P.3d 131 (Haw. 2003).

17. *Id.*

18. Am. Civil Liberties Union, *Interested Persons Memo Expressing Concerns about H.R. 3214, the "Advancing Justice Through DNA Technology Act of 2003"* (Dec. 16, 2003), at <http://www.aclu.org/Prisons/Prisons.cfm?ID=14614&c=26> (last visited Nov. 1, 2004) (expressing concern that the expansion of CODIS would result in the inclusion of DNA profiles from persons convicted of any state crime and if state law allows, from other individuals' DNA that is included in state databanks). The American Civil Liberties Union

Bush signed into law H.R. 5107, otherwise known as the Justice for All Act of 2004.<sup>19</sup> The Act expands CODIS to allow for the inclusion of virtually any DNA information that a state chooses to collect, with two exceptions: DNA profiles of arrestees who have not been charged in an indictment or information, and DNA samples that are voluntarily submitted.<sup>20</sup> The net effect of such legislation is that states are given grant funding to collect DNA samples from adults and juveniles arrested and charged with a crime.<sup>21</sup> Some consider the new law to be the "greatest single expansion of the federal government's power to collect and use DNA" since the CODIS database was created in 1992.<sup>22</sup>

Because the Justice for All Act of 2004 has only recently been enacted, no court has addressed the Fourth Amendment challenge to DNA sampling pursuant to the Act.<sup>23</sup> Nevertheless, the Act raises serious constitutional concerns.<sup>24</sup> Courts throughout the United States will soon be forced to address whether the newly expanded CODIS database infringes constitutional rights.<sup>25</sup> Specifically, courts will have to decide whether collecting DNA from individuals merely arrested and charged with a crime is a search, and if so, whether such a search is reasonable in light of Fourth Amendment protections.

The following discussion applies traditional Fourth Amendment principles to DNA sampling on arrest pursuant to the Justice for All Act of

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(ACLU) argues that while federal law "prohibits inclusion of DNA from persons who have been arrested but not indicted as well as those who voluntarily submit their DNA to be cleared of a crime, these exceptions do not sufficiently limit the unnecessary expansion of the database." *Id.* According to the ACLU, such legislation would ultimately encourage states to enact laws that require other classes of individuals to submit to DNA testing: "day care providers, immigrants, people with driver's licenses or even people with a particular disease." *Id.*

19. Pub. L. No. 108-405 (2004).

20. *Id.* at § 203(a)(1).

21. *Id.* at § 203.

22. See, e.g., Richard Willing, *FBI May Collect Juveniles' DNA*, USA TODAY, Nov. 17, 2003, at 1A.

23. A February 19, 2005 Westlaw search of all federal and state cases containing "Pub. L. No. 108-405" or "H.R. 5107" produced no cases applying or interpreting the Justice for All Act of 2004. Two cases exist, however, that mention Pub. L. No. 108-405 as an amendment to the DNA Act of 2000, 42 U.S.C. § 14135a (2004). In *United States v. Cooper* the court noted that the recent amendments to the DNA Act of 2000 did not apply to the case at hand because the defendant's crime occurred prior to the enactment of the amendments. 396 F.3d 308 (3d Cir. 2005). In *United States v. Peterson*, the court acknowledged the amendments to the DNA Act of 2000, but all references to 42 U.S.C. § 14135 referred to the pre-amendment version. 394 F.3d 98 (2d Cir. 2005).

24. See, e.g., John Wildermuth, *Proposition to Take DNA at Arrest Stirs Privacy Fears*, S.F. CHRON., June 12, 2004, at A1.

25. See *United States v. Kincade*, 379 F.3d 813, 837 (2004) (indicating that the opinion only construes the DNA Act of 2000 as applied to convicted offenders and not arrestees).

2004. This note makes no attempt to address every issue associated with government imposed DNA sampling, but instead, provides a framework for a Fourth Amendment analysis. Section II provides a background necessary for an analysis of the Act. This section begins with a survey of federal DNA database laws, including the most recent legislation, the Justice for All Act of 2004. Next, this section provides a framework for the Fourth Amendment analysis. The discussion presents the various methods for collecting DNA samples and outlines instances in which courts have considered the collection methods to be searches for purposes of the Fourth Amendment. To provide further framework, this section explains the traditional Fourth Amendment test of reasonableness and offers relevant case law where courts have considered the reasonableness of DNA sampling under the DNA Act of 2000. Because no court has addressed the constitutionality of collecting DNA samples from arrestees, this section discusses an arrestee's rights under the Fourth Amendment and the interests that are implicated by DNA sampling. In Section III, this note applies the traditional test of reasonableness to the provisions of the Justice for All Act of 2004 to determine whether a search of an arrestee's DNA is reasonable in light of the Fourth Amendment's prohibition against unreasonable searches. In Section IV, this article proposes, however, that the traditional Fourth Amendment balancing test should be modified to include other factors that bear on the reasonableness of the search of an arrestee's DNA. In this section, this note suggests that the traditional Fourth Amendment balancing test is severely limited in that it fails to consider whether using the CODIS database to generate leads for law enforcement is reasonable. After careful consideration of the risks associated in sampling an arrestee's DNA for use in a database, this note proposes that there are more interests at stake than the mere physical intrusion required for DNA sampling. In spite of these additional considerations, this note ultimately concludes that there is no Fourth Amendment violation in DNA sampling of arrestees pursuant to the Justice for All Act of 2004.

## II. BACKGROUND

### A. DNA Databases and Their Legislative Counterparts

DNA databases have existed in one form or another in the United States for over a decade, although their size and number have increased greatly in recent years. The following sections examine the history and development of the CODIS database that is currently maintained by the Federal Bureau of Investigation (FBI).

### 1. *Combined DNA Index System (CODIS)*

CODIS, the FBI's Combined DNA Index System, is a law enforcement tool used to link DNA from an unknown perpetrator to an identifiable suspect.<sup>26</sup> It operates much like the national criminal fingerprint database, the Integrated Automated Fingerprint Identification System.<sup>27</sup> Like the fingerprint database which catalogues fingerprint profiles, CODIS is essentially a registry of DNA samples from known individuals organized into a detailed database with which DNA collected from crime scenes, unidentified human remains, and crime victims can be compared.<sup>28</sup> Profiles obtained from convicted offenders can be linked together with profiles collected from crime scenes to identify a perpetrator who has left biological evidence at a crime scene.<sup>29</sup> Any DNA match generated by the database gives law enforcement probable cause to bring the offender into custody and obtain a confirmatory DNA sample.<sup>30</sup> For these reasons, CODIS serves as an important part of the investigation process.

### 2. *DNA Identification Act of 1994*

The CODIS program is a direct result of the DNA Identification Act of 1994, which authorizes the Attorney General of the United States to grant money to states for the development of DNA collection systems.<sup>31</sup> The DNA Identification Act of 1994, allocates funds to those states that collect, at a minimum, DNA samples from felony sex offenders and subsequently organize those samples into their own state database systems.<sup>32</sup> In addition,

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26. United States Dep't of Justice. Fed. Bureau of Investigation, *Combined DNA Index System Program—CODIS* (Apr. 2000), at <http://www.fbi.gov/hq/lab/codis/brochure.pdf> (last visited Feb. 20, 2005) [hereinafter *CODIS*].

27. Division of Governmental Studies and Services Washington State University and Smith Alling Lane, P.S., *National Forensic DNA Study Report* 37 (2003), at [http://www.ojp.usdoj.gov/nij/pdf/dna\\_studyreport\\_final.pdf](http://www.ojp.usdoj.gov/nij/pdf/dna_studyreport_final.pdf) (last visited Feb. 20, 2005). This report was prepared by Smith Alling Lane in partnership with Washington State University through the support of a grant awarded by the National Institute of Justice, Office of Justice Programs, United States Dep't of Justice (Grant 2002-LT-BX-K 003). *Id.* at 2.

28. *Id.* (citing the July 2002 Special Report from the National Institute of Justice (United States Dept. of Justice) titled, *Using DNA to Solve Cold Cases* (NCJ 194197)).

29. *Id.* As of December 2004, CODIS included DNA profiles from approximately 2 million convicted offenders. Fed. Bureau of Investigation, *NDIS Statistics*, at <http://www.fbi.gov/hq/lab/codis/clickmap.htm> (last visited Feb. 20, 2005).

30. *Id.* at 38.

31. Pub. L. No. 103-322, 210, 304(b), 108 Stat. 1796, 2070 (1994).

32. Pub. L. 104-132, Title VIII, § 811, Apr. 24, 1996, 110 Stat. 1312, *as amended* Pub. L. 106-546, § 6(a), Dec. 19, 2000, 114 Stat. 2733 (requiring that to be eligible for federal grants, states must "require that each person convicted of a felony of a sexual nature shall provide to appropriate State law enforcement officials, as designated by the chief executive officer of the State, a sample of blood, saliva, or other specimen necessary to conduct a DNA

the DNA Identification Act of 1994 requires each state to link its DNA database to the FBI's records in an effort to create one nationwide database.<sup>33</sup> Thus, CODIS emerged as the Combined DNA Identification System, operated by the FBI.<sup>34</sup>

Pursuant to the DNA Act of 1994, the CODIS program is organized into four separate databases, or indexes.<sup>35</sup> First, the Convicted Offender Index contains DNA samples taken from individuals convicted of certain crimes, no matter if these individuals are currently incarcerated or on supervised release.<sup>36</sup> Second, the Forensic Index contains DNA profiles generated from biological material discovered at crime scenes.<sup>37</sup> A third index includes DNA profiles from unidentified human remains.<sup>38</sup> A fourth index contains DNA profiles of missing persons whose DNA has been voluntarily contributed to the system by friends and family.<sup>39</sup> In addition to the four statutorily mandated indexes, the FBI maintains a "Population file," which catalogues anonymous DNA profiles.<sup>40</sup> The Population file provides statistical information necessary for determining the probability that DNA sample picked at random from the population would match a crime scene sample.<sup>41</sup>

To allow state and local agencies more control over the manner in which DNA profiles enter the CODIS system, CODIS exists in three tiers:

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analysis consistent with the standards established for DNA testing by the Director of the Federal Bureau of Investigation").

33. *Id.* at § 811(b)(1)(B), 110 Stat. at 1313.

34. Fed. Bureau of Investigation, Testimony of Dwight E. Adams, Assistant Director, Laboratory Division, FBI, Before the Senate Judiciary Committee, Subcommittee on Crime and Drugs (May 14, 2002), at <http://www.fbi.gov/congress/congress02/adams051402.htm> (last visited Feb. 20, 2005) (stating that the acronym CODIS is used to describe not only the software used to maintain and run these DNA databases but also "the entire program of software support for Federal, state and local forensic laboratories as well as the various indices (Forensic, Offender and Missing Person) at all three levels—national, state and local.").

35. 42 U.S.C. §§ 14131–14133 (2004) (authorizing the director of the FBI to "establish an index of DNA identification records of persons convicted of crimes" as well as indexes of "analyses of DNA samples recovered from crimes scenes," "recovered from unidentified human remains," and "voluntarily contributed from relatives of missing persons.").

36. 42 U.S.C. § 14132(a)(1) (2004).

37. *Id.* at § 14132(a)(2).

38. *Id.* at § 14132(a)(3).

39. *Id.* at § 14132(a)(4)–(5).

40. Stephen J. Niezgoda, Jr. & Barry Brown, Ph.D., The FBI Laboratory's Combined DNA Index System Program, in *Proceedings from the Sixth International Symposium on Human Identification*, (Promega Corp. ed., 1996), at <http://www.promega.com/geneticidproc/ussymp6proc/niezgod.htm> (last visited Feb. 20, 2005). The Population file exists as tool for CODIS developers to analyze the frequency of certain genetic markers among various populations. *Id.*

41. *Id.*



local, state, and national.<sup>42</sup> The first tier, the Local DNA Index System (LDIS), is the level at which all profiles originate.<sup>43</sup> The FBI installs the LDIS software program at local crime laboratories controlled by sheriffs' offices or state police agencies.<sup>44</sup> Local law enforcement collect DNA samples from according to state law, and local forensic examiners enter the DNA profiles into their independent LDIS system.<sup>45</sup> To compare profiles with other LDIS systems within the state, the custodian of the local database will submit its DNA profiles to the state controlled DNA database, for uploading in the second tier of CODIS, the State DNA Index System (SDIS).<sup>46</sup> SDIS is maintained by individual state crime laboratories and allows other laboratories within the state to exchange and compare DNA profiles with the hope of locating an identifiable suspect.<sup>47</sup> To receive federal funding, the states are then required to contribute DNA profiles of convicted offenders to the third tier of the CODIS system, the National DNA Index System (NDIS).<sup>48</sup> This nationwide database maintained by the FBI allows state forensic crime laboratories to share and exchange DNA profiles with other participating forensic laboratories across the country.<sup>49</sup>

While the FBI provides software and training to state and local laboratories that participate in the CODIS database, it is important to remember that this tiered structure "allows state and local crime labs to operate their databases according to their specific legislative requirements."<sup>50</sup> In other words, the FBI might maintain control over the profiles once uploaded in the NDIS, but the state and local authorities ultimately have control over which profiles are entered into their respective LDIS and SDIS systems.<sup>51</sup>

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42. *DNA Databasing Initiatives*, *supra* note 8. Note that the FBI "provides software, together with installation, training, and user support free of charge to any state and local law enforcement labs performing DNA analysis" for use in the CODIS database. *Id.*

43. *Id.*

44. Division of Governmental Studies and Services Washington State University and Smith Alling Lane, P.S., *supra* note 27, at 38.

45. *Id.*

46. *Id.*

47. *Id.* The SDIS systems are usually controlled and operated by the "agency responsible for implementing and monitoring compliance with the state's convicted offender statute." *Id.*

48. *Id.*; 42 U.C.S. § 14135(a) (2004).

49. Division of Governmental Studies and Services Washington State University and Smith Alling Lane, P.S., *supra* note 27, at 38.

50. *CODIS*, *supra* note 26.

51. *Id.* Note that one consequence of combining these state databases into one is that CODIS stores DNA profiles taken from individuals who have been convicted of substantially broader categories of offenses than the qualifying federal offenses enumerated in the DNA Backlog Elimination Act of 2000, 42 U.S.C. § 14135a(d). Indeed, many state programs reach well beyond the federal model—some collecting information from non-violent drug offenders, and others requiring samples from persons convicted of simple misdemeanors. Examples include La. Rev. Stat. § 15:602 (2004), Tex. Gov't Code § 411.1471(a)(2) (2004), and Va.

### 3. *DNA Analysis Backlog Elimination Act of 2000*

Between 1994 and 1996, no DNA samples were collected from any persons convicted of federal crimes because the language of the DNA Act of 1994 authorized only the creation of CODIS and not the collection of samples from convicted federal offenders.<sup>52</sup> In 1996, as part of the Anti-Terrorism and Effective Death Penalty Act (AEDPA),<sup>53</sup> Congress instructed the FBI to expand CODIS to include DNA profiles from federal offenders.<sup>54</sup> After AEDPA's passage, however, the United States Department of Justice concluded that AEDPA still did not give federal law enforcement officials the requisite legal authority to collect DNA samples from federal offenders.<sup>55</sup> Consequently, the DNA Analysis Backlog Elimination Act of 2000, (DNA Act of 2000), was enacted, and now serves as the statutory basis for compulsory DNA sampling of federal parolees, probationers, and prisoners.<sup>56</sup>

In addition to expanding the CODIS system to include certain federal offenders, the DNA Act of 2000 also allocated funds to the states to reduce the backlog of DNA samples that had been collected, but not analyzed.<sup>57</sup> As a result of the nationwide acceptance of the CODIS database, state crime labs had accrued an enormous backlog of DNA samples that had yet to be profiled and entered into their state and local databases.<sup>58</sup> After finding that "DNA testing has emerged as the most reliable forensic technique for identifying criminals when biological material is left at the crime scene," Congress authorized \$125 million dollars in federal funding over four years to help states clear up the backlog of unanalyzed DNA samples.<sup>59</sup> In addition, those states that assured the government that their forensic laboratories would perform DNA analysis in accordance with nationwide quality protocols as defined by the director of the FBI would be eligible for grant funding to aid in the collection of new samples.<sup>60</sup>

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Code Ann. § 19.2-310.2:1 (2004).

52. See DNA Analysis Backlog Elimination Act of 2000, H.R. REP NO. 106-900 (I), at 8 (2000).

53. Pub. L. No. 104-132, 110 Stat. 1214 (1996).

54. See DNA Analysis Backlog Elimination Act of 2000, H.R. REP NO. 106-900 (I), at 9 (2000).

55. *Id.*

56. *Id.* at 8.

57. *Id.* at 9-10.

58. Nat'l Inst. of Justice, United States Dep't of Justice, NCJ 199425, *NIJ Special Report: Report to the Attorney General on Delays in Forensic DNA Analysis 2* (2003), at <http://www.ncjrs.org/pdffiles1/nij/199425.pdf> (last visited Feb. 22, 2005).

59. 42 U.S.C. § 14135(j) (2004); Pub. L. No. 106-561, § 4, Dec. 21, 2000, 114 Stat. 2791, Findings (1).

60. 42 U.S.C. § 14135(b) (2004).

Pursuant to the DNA Act of 2000, certain federal and state offenders who are currently incarcerated, on parole, probation, or supervised release are required to provide a DNA sample for inclusion in CODIS.<sup>61</sup> Offenders who have been convicted of a federal crime are required to submit a DNA sample if the crime(s) for which they were convicted includes any of the violent and sexual offenses enumerated by the DNA Act of 2000.<sup>62</sup> For offenders convicted of state offenses, inclusion of their DNA profile in CODIS depends upon whether the crime for which they were convicted is a qualifying offense as determined by state law.<sup>63</sup> In general, all states participating in the CODIS system consider violent felony and sex offenses as qualifying offenses.<sup>64</sup>

The DNA Act of 2000 establishes the procedures for collecting DNA samples from qualifying federal offenders.<sup>65</sup> The collection procedures, however, are vague. The DNA Act of 2000 defines a DNA sample as “a

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61. 42 U.S.C. § 14135a(a)(1)–(3) (2004).

62. 42 U.S.C. § 14135a(d) (2004). QUALIFYING FEDERAL OFFENSES—(1) The offenses that shall be treated for purposes of this section as qualifying Federal offenses are the following offenses under title 18, United States Code, as determined by the Attorney General:

- (A) Murder (as described in section 1111 of such title), voluntary manslaughter (as described in section 1112 of such title), or other offense relating to homicide (as described in chapter 51 of such title, sections 1113, 1114, 1116, 1118, 1119, 1120, and 1121).
- (B) An offense relating to sexual abuse (as described in chapter 109A of such title, sections 2241 through 2245), to sexual exploitation or other abuse of children (as described in chapter 110 of such title, sections 2251 through 2252), or to transportation for illegal sexual activity (as described in chapter 117 of such title, sections 2421, 2422, 2423, and 2425).
- (C) An offense relating to peonage and slavery (as described in chapter 77 of such title).
- (D) Kidnapping (as defined in section 3559(c)(2)(E) of such title).
- (E) An offense involving robbery or burglary (as described in chapter 103 of such title, sections 2111 through 2114, 2116, and 2118 through 2119).
- (F) Any violation of section 1153 involving murder, manslaughter, kidnapping, maiming, a felony offense relating to sexual abuse (as described in chapter 109A), incest, arson, burglary, or robbery.
- (G) Any attempt or conspiracy to commit any of the above offenses.

63. 42 U.S.C. § 14135(b)(3) (2004).

For a State to be eligible to receive a grant under this section, the chief executive officer of the State shall submit to the Attorney General an application in such form and containing such information as the Attorney General may require. The application shall . . . (3) include a certification that the State has determined, by statute, rule, or regulation, those offenses under State law that shall be treated for purposes of this section as qualifying State offenses.

64. Smith Alling Lane, P.S., DNA Resource, *State DNA Database Laws Qualifying Offenses*, at

[http://www.dnaresource.com/bill\\_tracking\\_list.htm](http://www.dnaresource.com/bill_tracking_list.htm) (last visited Apr. 30, 2005).

65. 42 U.S.C. § 14135a(a)(4) (2004).

tissue, fluid, or other bodily sample of an individual on which a DNA analysis can be carried out.”<sup>66</sup> While the text of the Act does not specify the manner for collecting a DNA sample, FBI guidelines require those in federal custody and others subject to the DNA Act of 2000 to submit blood samples for DNA analysis.<sup>67</sup> Those offenders who resist shall can be charged with a Class A misdemeanor, punishable by up to one year’s imprisonment and a fine of as much as \$250,000.<sup>68</sup>

The DNA Act of 2000 permits the Director of the Bureau of Prisons or the probation office to contract with units of State or local government or with private entities to provide for the collection of samples from federal offenders.<sup>69</sup> In addition, individuals authorized by the Director to collect the sample “may use or authorize the use of such means as are reasonably necessary to detain, restrain . . . an individual who refuses to cooperate in the collection of the sample.”<sup>70</sup> The following excerpt briefly illustrates how the collection process works for federal offenders on supervised release who have at any time been convicted of a qualifying federal offense:

The [probation] officer schedules an appointment for the offender to meet with the contractor who is responsible for the blood draw. At the time of the appointment, the [probation] officer accompanies the offender to the site of the blood draw, which may be a health care facility, or even the probation office. The [probation] officer completes the FBI form and takes the offender’s fingerprints. The contractor then completes the blood draw and both the [probation] officer and the contractor sign the FBI form. The FBI-provided kits contain in standardized form all of the elements needed for a successful blood draw. The [probation] officer ensures that the form is completed correctly and the appropriate signatures appear where required. The officer seals the kit and places it in any mailbox.<sup>71</sup>

At the end of the procedure, the federal offender’s blood is turned over to the FBI for DNA analysis.<sup>72</sup> After generating the DNA profile, the FBI uploads the profile into CODIS.<sup>73</sup>

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66. 42 U.S.C. § 14135a(c)(1).

67. *CODIS*, *supra* note 26. Note that because federal law does not establish guidelines for states to follow when collecting DNA from state offenders, states are free to employ a wide variety of techniques. See Division of Governmental Studies and Services Washington State University and Smith Alling Lane, P.S., *supra* note 27, at 40.

68. 42 U.S.C. § 14135a(a)(5); 18 U.S.C. §§ 3571 & 3581 (2005). Note that the Justice for All Act of 2004 amended the penalty from \$100,000 to \$250,000. H.R. 5107, 108th Cong. § 203 (2004).

69. *Id.* at § 14135a(a)(4)(B) (2004).

70. *Id.* at § 14135a(a)(4)(A) (2004).

71. Nancy Beatty Gregoire, *Federal Probation Joins the World of DNA Collection*, 66 FED. PROBATION 30, 32 (Jun. 2002).

72. 42 U.S.C. § 14135a(b) (2004).

Again, federal law does not mandate DNA collection procedures for state offenders.<sup>74</sup> Instead, each state is responsible for determining its own DNA collection procedures.<sup>75</sup> As of December 2003, over one-half of the state crime laboratories adopted the federal model by collecting DNA samples in the form of blood.<sup>76</sup> The remainder of the states collects DNA in the form of buccal (cheek) swabs.<sup>77</sup> In addition, some states require DNA to be obtained in the form of both a blood and buccal swab sample.<sup>78</sup>

As of August 2004, all fifty states participate in the CODIS database.<sup>79</sup> Of the states that participate, thirty-four states collect DNA from all convicted felons, thirty-one from juvenile offenders, and twenty-six from those convicted of misdemeanor offenses.<sup>80</sup> In recent years a few states have expanded their SDIS databases to include DNA profiles from more than just convicted offenders. Four states—Virginia, Louisiana, Texas, and California—have authorized the collection of DNA from individuals merely arrested and charged for certain crimes.<sup>81</sup> Moreover, many of the New England states have introduced legislation which, if enacted, would require a DNA sample from anyone brought into custody for “fingerprintable arrests.”<sup>82</sup>

It is important to remember that the DNA Act of 1994, as originally enacted, did not allow the CODIS database to accept DNA profiles from

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73. *Id.*; see also DNA Analysis Backlog Elimination Act of 2000, H.R. REP. NO. 106-900(I) at 27 (2000) (indicating that in addition to the DNA profile, the CODIS records contain only an identifier for the agency that provided the DNA sample, a specimen identification number, and the name of the personnel associated with the analysis).

74. 42 U.S.C. § 14135a(a)(4) (2004).

75. *Id.*

76. Division of Governmental Studies and Services Washington State University and Smith Alling Lane, P.S., *supra* note 27, at 40.

77. *Id.* A survey of state crime laboratories indicates that 52.4% collect a blood sample from offenders while 28.6% of states collect buccal swabs. *Id.*

78. *Id.* Nearly one in five states (nineteen percent) collect both types of samples. *Id.*

79. Fed. Bureau of Investigation, *NDIS Participants*, at <http://www.fbi.gov/hq/lab/codis/partstates.htm> (last visited Feb. 22, 2005).

80. Lane, *supra* note 64.

81. Smith Alling Lane, *2004 Forensic DNA Legislative Update and the “Attorney General’s Report on the DNA Evidence Backlog,”* Presented June 29, 2004 at the Fifth Annual DNA Grantees Workshop in Washington, D.C., at [www.dnaresource.com](http://www.dnaresource.com) (last visited Feb. 22, 2005); California voters recently passed the DNA Fingerprint Unsolved Crime and Innocence Protection Act during the November 2, 2004 elections, which requires collection of DNA samples from all felons, from adults and juveniles arrested for or charged with specified crimes, and in five years, from adults arrested for or charged with any felony. California 2003-2004 Regular Session, Ballot Measure 19, Proposition 69, California Voter Information Guide, *Proposition 69: Official Title and Summary* (Nov. 2004), at <http://www.voterguide.ss.ca.gov/propositions/prop69-title.htm> (last visited Nov. 14, 2004).

82. *Id.*

individuals who had yet to be convicted of a crime.<sup>83</sup> Moreover, the language of the original DNA Act of 1994 did not permit DNA profiles of juveniles to be uploaded into the CODIS system.<sup>84</sup> Under the original law, states that participated in the CODIS system were free to upload DNA profiles of various classes of individuals in their own LDIS and SDIS databases, but only DNA profiles generated from individuals *convicted* of state and federal offenses could be shared with the overarching CODIS database.<sup>85</sup> As of October 30, 2004, however, the language of the DNA Act of 1994 was modified to allow for such inclusions.<sup>86</sup> The following section explores the amendments to the DNA Act of 1994.

#### 4. *Justice for All Act of 2004 / Debbie Smith Act of 2004*

On October 30, 2004, President George Bush signed into law the Justice for All Act of 2004.<sup>87</sup> Title II of the Act enacts the Debbie Smith Act of 2004, which provides over \$1 billion over the next five years to the criminal justice system in order to realize the full potential of DNA technology to solve crimes and protect the innocent.<sup>88</sup> Specifically, the funds will be applied to eliminate the current backlog of unanalyzed DNA samples in the nation's crime labs and to improve the capacity of federal, state and local crime labs to conduct DNA analyses.<sup>89</sup> The bill was introduced into Congress to "protect the innocent and convict the guilty" and to "move our criminal justice system into a new era of increased fairness and efficiency" so that no more innocent people are wrongly convicted, or worse, sentenced to death.<sup>90</sup> To accomplish this goal, the Act (1) provides \$755 million to test the backlog of over 300,000 rape kits and other crime scene evidence that has yet to be profiled and uploaded into the CODIS database, and (2) au-

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83. 42 U.S.C. § 14132(a)(1) (2004).

84. Division of Governmental Studies and Services Washington State University and Smith Alling Lane, P.S., *supra* note 27, at 38 (indicating that because most juveniles are "adjudicated delinquent" rather than "convicted" of a crime, CODIS does not allow for inclusion of juveniles' DNA profiles).

85. *Id.*

86. Pub. L. No. 108-405, 118 Stat. 2260 (2004).

87. *Id.* at § 202.

88. Pub. L. No. 108-405, 118 Stat. 2260 (2004). The Justice for All Act of 2004 incorporates the Advancing Justice Through DNA Technology Act, which was originally introduced to Congress as H.R. 3214/S 1700. 150 Cong. Rec. S11609-01, 108th Cong. (Nov. 19, 2004).

89. *Id.*

90. Statement of Senator Orin G. Hatch, Chairman, United States Senate Committee on the Judiciary, *Press conference to introduce the "Advancing Justice Through DNA Technology Act of 2003"* (Oct. 1, 2003) at <http://justice.policy.net/proactive/newsroom/release.vtml?id=35281> (last visited Feb. 23, 2005).

thorizes more than \$500 million for programs to improve the capacity of crime labs to conduct DNA analysis, train examiners, support sexual assault forensic examiner programs, and promote the use of DNA to identify missing persons.<sup>91</sup>

In addition to providing funding to the states for improvement of DNA technology, Title II of the Justice for All Act of 2004 amends the DNA Identification Act of 1994<sup>92</sup> and the DNA Act of 2000.<sup>93</sup> Specifically, section 203 of the embedded Debbie Smith Act of 2004 adds language that significantly expands the categories of individuals whose DNA may be uploaded into the Convicted Offender index of CODIS.<sup>94</sup> The amendment to the DNA Identification Act of 1994 modifies the language to allow states to share DNA profiles of not only those persons convicted of crimes, but also those persons who have been merely charged with a crime.<sup>95</sup> In addition, the amendments expand CODIS to include DNA profiles from those individuals whose DNA could lawfully be obtained and uploaded in LDIS and SDIS databases according to state law.<sup>96</sup> While the Debbie Smith Act of 2004 prohibits inclusion of DNA profiles from persons who voluntarily submit their DNA or from persons who have been arrested but not charged, the Act does not exclude DNA profiles from juvenile offenders, misdemeanants, or others whose DNA has been lawfully obtained by state authorities.<sup>97</sup> Fi-

91. Justice for All Act of 2004, H.R. 5107, 108th Cong. (2004).

92. 42 U.S.C. § 14132 (2004); 42 U.S.C. § 14132 (2005).

93. 42 U.S.C. § 14135a (2000); 42 U.S.C. § 14135a (2005).

94. Justice for All Act of 2004, H.R. 5107, 108th Cong. (2004). The relevant portion of the legislation reads as follows:

42 U.S.C. § 14132. Index to facilitate law enforcement exchange of DNA identification information

(a) Establishment of index. The Director of the Federal Bureau of Investigation may establish an index of--

(1) DNA identification records ~~of persons convicted of crimes; of--~~

(A) persons convicted of crimes;

(B) persons who have been charged in an indictment or information with a crime; and

(C) other persons whose DNA samples are collected under applicable legal authorities, provided that DNA profiles from arrestees who have not been charged in an indictment or information with a crime, and DNA samples that are voluntarily submitted solely for elimination purposes shall not be included in the National DNA Index system; and

(2) analyses of DNA samples recovered from crime scenes;

(3) analyses of DNA samples recovered from unidentified human remains; and

(4) analyses of DNA samples voluntarily contributed from relatives of missing persons.

Note that with the expansion of the categories of DNA profiles that may be uploaded, the title "Convicted Offender" index becomes a bit misleading.

95. Justice for All Act of 2004, H.R. 5107, 108th Cong. § 203 (2004).

96. *Id.*

97. *Id.*

nally, the Debbie Smith Act of 2004 modifies the DNA Act of 2000 to include DNA profiles of federal offenders not just convicted of certain qualifying felonies, but all felonies.<sup>98</sup>

Since the Debbie Smith Act of 2004 was first introduced in October of 2003 as part of the Advancing Justice Through DNA Technology Act,<sup>99</sup> there has been steady debate about whether the expansion of CODIS is nec-

98. *Id.* The relevant portion of the legislation reads as follows:

42 U.S.C § 14135a. Collection and use of DNA identification information from certain Federal offenders . . .

(d) Qualifying Federal offenses.

(4) The offenses that shall be treated for purposes of this section as qualifying Federal offenses are the following offenses under title 18, United States Code, as determined by the Attorney General:

(A) (1) Any felony Murder (as described in section 1111 of such title), voluntary manslaughter (as described in section 1112 of such title), or other offense relating to homicide (as described in chapter 51 of such title, sections 1113, 1114, 1116, 1118, 1119, 1120, and 1121).

(B) (2) Any offense under chapter 109A of title 18, United States Code An offense relating to sexual abuse (as described in chapter 109A of such title, sections 2241 through 2245), to sexual exploitation or other abuse of children (as described in chapter 110 of such title, sections 2251 through 2252), or to transportation for illegal sexual activity (as described in chapter 117 of such title, sections 2421, 2422, 2423, and 2425).

(C) (3) Any crime of violence (as the term is defined in section 16 of title 18, United States Code) An offense relating to peonage and slavery (as described in chapter 77 of such title [18 USCS §§ 1581 et seq.]).

(D) (4) Any attempt or conspiracy to commit any of the offenses in paragraphs (1) through (3) Kidnapping (as defined in section 3559(e)(2)(E) of such title).

(E) An offense involving robbery or burglary (as described in chapter 103 of such title, sections 2111 through 2114, 2116, and 2118 through 2119).

(F) Any violation of section 1153 involving murder, manslaughter, kidnapping, maiming, a felony offense relating to sexual abuse (as described in chapter 109A [18 USCS §§ 2241 et seq.]), incest, arson, burglary, or robbery.

(G) Any attempt or conspiracy to commit any of the above offenses.

(2) In addition to the offenses described in paragraph (1), the following offenses shall be treated for purposes of this section as qualifying Federal offenses, as determined by the Attorney General:

(A) Any offense listed in section 2332b(g)(5)(B) of title 18, United States Code.

(B) Any crime of violence (as defined in section 16 of title 18, United States Code).

(C) Any attempt or conspiracy to commit any of the above offenses.

99. The Advancing Justice Through DNA Technology Act was originally introduced into Congress as H.R. 3214, but its provisions were later incorporated into the Justice for All Act of 2004, H.R. 5107, and no longer stands alone as an act. 150 Cong. Rec. S11609-01, 108th Cong. (Nov. 19, 2004).



essary, or more importantly, whether it is constitutional.<sup>100</sup> The debate began as a result of the initial draft legislation which contained language permitting the inclusion of DNA profiles from all persons whose DNA had been collected lawfully, the only exception being that no DNA obtained on a voluntary basis would be profiled and included in CODIS.<sup>101</sup> Civil libertarians, including members of the ACLU, expressed concern that such an expansion of CODIS “undermines presumption of innocence and sets a chilling precedent for data collection by the government of its citizens.”<sup>102</sup> By contrast, the National District Attorneys Association encouraged Congress to expand CODIS to mandate the collection of DNA profiles from all convicted felons, all arrestees, certain juvenile offenders, and individuals excused from criminal liability as a result of mental illness or disease.<sup>103</sup> After careful consideration, Congress amended the draft legislation but preserved the original intent of the drafters, which was to significantly expand

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100. Am. Civil Liberties Union, *Interested Persons Memo Expressing Concerns about H.R. 3214, the “Advancing Justice Through DNA Technology Act of 2003,” which Includes the Innocence Protection Act* (December 16, 2003), at <http://www.aclu.org/Prisons/Prisons.cfm?ID=14614&c=26> (last visited Feb. 23, 2005) (arguing that proposed legislation that would include in CODIS DNA profiles from persons not yet convicted of a crime “undermines the presumption of innocence” and any expansion of CODIS that does so is “unnecessary.”); see also Testimony of Peter J. Neufeld, Co-Director of the Innocence Project, Subcommittee on Crime, Terrorism, and Homeland Security, *Advancing Justice Through the use of Forensic DNA Technology 2003* (July 14, 2003), at <http://justice.policy.net/proactive/newsroom/release.vtml?id=34602> (last visited Feb. 23, 2005)(emphasizing the necessity of “balance between the need for public safety and civil liberties”).

101. Advancing Justice Through DNA Technology Act of 2003, H.R. 3214, 108th Cong. (2003), at <http://thomas.loc.gov/cgi-bin/query>. The relevant portion of the originally proposed legislation reads as follows:

§ 103. EXPANSION OF COMBINED DNA INDEX SYSTEM.

(a) INCLUSION OF ALL DNA SAMPLES FROM STATES—Section 210304(a)(1) of the DNA Identification Act of 1994 (42 U.S.C. 14132(a)(1)) is amended by striking ‘of persons convicted of crimes;’ and inserting the following: of—

(A) persons convicted of crimes; and

(B) other persons whose DNA samples are collected under applicable legal authorities, provided that DNA profiles from DNA samples that are voluntarily submitted solely for elimination purposes shall not be included in the Combined DNA Index System;

102. Am. Civil Liberties Union, *Letter to Senators of the Judiciary Committee Expressing Concerns about S. 1700, the “Advancing Justice Through DNA Technology Act of 2003* (June 3, 2004), at <http://www.aclu.org/CriminalJustice/CriminalJustice.cfm?ID=15900&c=15> (last visited Feb. 23, 2005).

103. Nat’l Dist. Attorneys Ass’n, *Policy Position on DNA Technology and the Criminal Justice System* (July 20, 2003), at [http://www.ndaa-apri.org/pdf/dna\\_policy\\_position\\_july\\_20\\_2003.pdf](http://www.ndaa-apri.org/pdf/dna_policy_position_july_20_2003.pdf) (last visited Feb. 23, 2005).

the CODIS database to include DNA profiles of “all persons whose DNA samples have been collected under applicable legal authorities” subject to few exceptions.<sup>104</sup> The drafters believed the need for expansion was necessary and decided to proceed with expansion in an effort to help solve and prevent “some of the most serious violent crimes.”<sup>105</sup> Indeed, the current legislation, as outlined in the Justice for All Act of 2004, authorizes the FBI to expand CODIS to upload DNA profiles from state and local DNA databases so long as the profiles are lawfully obtained and they do not derive from arrestees yet to be charged or from individuals who have voluntarily provided their DNA for elimination purposes.<sup>106</sup>

#### B. Fourth Amendment Considerations

The Fourth Amendment guarantees that all people shall be “secure in their persons, houses, papers, and effects, against unreasonable searches and seizures.”<sup>107</sup> The United States Supreme Court’s opinion in *Katz v. United States* defines a search to be a government intrusion into an area where one has a reasonable expectation of privacy.<sup>108</sup> In other words, when a government intrusion goes beyond the physical characteristics exposed to the public, a search results and the Fourth Amendment is triggered.<sup>109</sup> Since the decision in *Katz*, the Court has emphasized that the Fourth Amendment establishes “rules and presumptions” that limit the government’s ability to intrude upon matters of personal privacy.<sup>110</sup> These limitations apply to searches conducted on the inside or outside of a person’s body.<sup>111</sup>

The scope of the Fourth Amendment is important for a constitutional analysis of DNA sampling because DNA exists in one’s bodily fluids as

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104. H.R. REP. NO. 108–711, at 2 (2004), *at* <http://capwiz.com/jp/webreturn/?url=http://thomas.loc.gov/cgi-bin/bdquery/z?d108:h.r.5107> (last visited Nov. 6, 2004).

105. *Id.*

106. Justice for All Act of 2004, H.R. 5107, 108th Cong. § 203 (2004). Note that elimination samples are classified as “DNA records that includes suspects, bystanders at a crime scene, and anyone else who the police ask to provide a biological specimen.” Letter from Peter J. Neufeld, Innocence Project, Cardozo Law School, to Honorable John M. Leventhal 7 (Feb. 27, 2003) in support of *Brief of Amici Curiae, New York Civil Liberties Union and Cardozo Law School Innocence Project, People v. Rodriguez*, 764 N.Y.S.2d 305 (N.Y. Sup. Ct. 2003).

107. UNITED STATES CONST. amend. IV.

108. 389 U.S. 347, 351–52 (1967).

109. *Id.*

110. *Illinois v. McArthur*, 531 U.S. 326, 330 (2001).

111. *See, e.g., Winston v. Lee*, 470 U.S. 753, 759–760 (1985) (indicating that the Fourth Amendment protects an individual’s interest against physical intrusions into the body and such intrusions should be measured against the *Katz* standard of reasonableness).

well as in biological material discarded from the body.<sup>112</sup> Depending on the degree of intrusiveness associated with the manner of collecting a DNA sample, a search into one's protected area of privacy may or may not exist.<sup>113</sup> Because a Fourth Amendment search analysis ultimately balances the degree of intrusiveness against an individual's privacy interests,<sup>114</sup> the following sections explore the different methods of DNA collection and the intrusions they impose. Specifically, the sections will examine how courts have viewed physically intrusive and nonintrusive methods of collecting biological samples from individuals within the traditional Fourth Amendment context. In addition, this section considers whether a search results from the mere analysis of a DNA sample.

### 1. *Whether DNA Sampling Constitutes a Search*

To construct the CODIS database, samples of DNA must be collected, profiled, and catalogued in such a way that it can be accessed efficiently. The following sections explore how courts view the collection of DNA from individuals in light of Fourth Amendment.

#### a. Collecting DNA through intrusive means

An inspection or extraction that penetrates the body or enters its cavities is regarded as infringing upon a reasonable expectation of privacy and therefore falls within the scope of the Fourth Amendment.<sup>115</sup> As a result, it is a search to collect DNA from sources found within the body.<sup>116</sup>

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112. See Victor Walter Weedn & John W. Hicks, Nat'l Inst. of Just., United States Dep't of Just., *The Unrealized Potential of DNA Testing* 1-2 (June 1998) at <http://www.ncjrs.org/pdffiles/170596.pdf> (last visited Feb. 24, 2005) (explaining that because DNA is found in all cells with a nucleus, it is discoverable in virtually every fluid or tissue including blood, semen, saliva, skin cells, bone, teeth, tissue, urine, feces, hair, and other biological specimens).

113. Cf. *United States v. Place*, 462 U.S. 696(1983) (subjecting one's luggage to a "dog sniff" does not constitute a search for Fourth Amendment purposes because it does not intrude on one's legitimate expectation of privacy).

114. See *infra* Part II.B.2.

115. *Winston v. Lee*, 470 U.S. 753, 760 (1985); *Schmerber v. California*, 384 U.S. 757, 767-768 (1966).

116. *United States v. Kincade*, 379 F.3d 813, 821 n.15 (9th Cir. 2004) (recognizing that the "compulsory extraction of blood for DNA profiling unquestionably implicates the right to personal security embodied in the Fourth Amendment, and thus constitutes a 'search' within the meaning of the Constitution").

i. *Blood*

One possesses a reasonable expectation of privacy in one's bodily fluids by virtue of their not being exposed to the public.<sup>117</sup> Because DNA exists in one's blood, a physical intrusion into the body to recover a DNA sample is a search for Fourth Amendment purposes.<sup>118</sup> The United States Supreme Court in *Schmerber v. California* first established that the physical intrusion necessary to collect a blood sample invades the "integrity of an individual's person," and therefore constitutes a search.<sup>119</sup> The Court, in *Schmerber*, concluded that the involuntary taking of blood from an individual whom there was probable cause to suspect of drunken driving was both a seizure and a search within the meaning of the Fourth Amendment.<sup>120</sup> The Court, however, held that due to exigent circumstances, such a warrantless invasion of the body was reasonable under the facts of the case.<sup>121</sup> According to the *Schmerber* court, the assertion that the blood testing "procedure involves virtually no risk, trauma, or pain" to most individuals does not detract from the fact that it necessitates a physical intrusion into the body.<sup>122</sup> Moreover, the suggestion that such a procedure had become "routine in our every day lives" does not lessen the value of one's interest in his or her bodily integrity.<sup>123</sup> Instead, the *Schmerber* court emphasized that a Fourth Amendment search results whenever the skin is pierced to collect a blood sample.<sup>124</sup>

ii. *Saliva and cheek swabs*

Swabbing the inside of an individual's mouth with a soft pad to collect saliva or skin cells is an effective way to collect a DNA sample.<sup>125</sup> When DNA samples are collected by swabbing the inside of an individual's

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117. Cf. *Katz v. United States*, 389 U.S. 347, 351 (1967) ("What a person knowingly exposes to the public, even in his own home or office, is not a subject of Fourth Amendment protection . . . . But what he seeks to preserve as private, even in an area accessible to the public, may be constitutionally protected.").

118. *Kincade*, 379 F.3d at 821 n.15.

119. 384 U.S. at 772.

120. *Id.* at 767.

121. *Id.* at 770-71.

122. *Id.* at 771.

123. *Id.* at n.13 (quoting *Breithaupt v. Abram*, 352 U.S. 432, 436 (1957)).

124. *Id.* at 767 (holding that compulsory administration of a blood test . . . plainly involves the broadly conceived reach of a search and seizure under the Fourth Amendment).

125. Moses S. Schanfield P.h.D. et al., *Abstract, A New Oral Sampling Device for the Collection of Human DNA: Collection Time, Long Term Storage Studies, and Sample Collection in Children*, Ninth Annual Symposium on Human Identification (1998), available at <http://www.promega.com/geneticidproc/ussymp9proc/abstracts/ab45.pdf> (last visited Feb. 24, 2005).

mouth, a search occurs and the Fourth Amendment is triggered.<sup>126</sup> In *Henry v. Ryan*, saliva samples were sought from the defendant pursuant to a grand jury subpoena, and the district court looked to *Schmerber* as a guide for its analysis: "While no court has explicitly found that a saliva sample is a Fourth Amendment search, extracting a saliva sample seems to involve the same sort of intrusion that goes beyond the physical characteristics exposed to the public and into the security of the person."<sup>127</sup> Similarly, the defendant in *United States v. Nicolosi* was ordered to provide a saliva sample by having the inside of his mouth swabbed with a pad.<sup>128</sup> The *Nicolosi* court addressed whether the Government must first obtain a search warrant to swab the inside of the defendant's mouth.<sup>129</sup> Applying *Schmerber* and *Ryan*, the court held that "[s]uch a[n] scenario, wherein a citizen is directed to submit to an intrusion into his body, is properly viewed as implicating his dignitary interests."<sup>130</sup> The *Nicolosi* court ultimately held that "[s]uch a procedure is clearly a search within the skin, if not literally beneath it."<sup>131</sup> As a result, "proper compliance with the requirements of the Fourth Amendment is mandated."<sup>132</sup>

#### b. Collecting DNA through non-intrusive means

It is possible to collect a DNA sample through means that do not require penetration below the skin's surface.<sup>133</sup> One can collect DNA from

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126. *In re Grand Jury Proceedings Involving Vickers*, 38 F. Supp. 2d 159, 165 (D.N.H. 1998) ("A grand jury subpoena compelling a citizen to provide saliva samples does implicate his or her Fourth Amendment rights."); *United States v. Nicolosi*, 885 F. Supp. 50, 56 (E.D.N.Y. 1995) (holding that a saliva sample is "properly deemed a search under the Fourth Amendment").

127. 775 F. Supp 247, 253 (N.D. Ill. 1991). In *Ryan*, a pad was stuck in the defendant's mouth to recover the saliva sample. *Id.*

128. 885 F. Supp 50 (E.D.N.Y. 1995).

129. *Id.* at 55.

130. *Id.*; *In re Shabazz*, 200 F. Supp 2d 578, 582–583 (D.S.C. 2002) (holding that submitting a saliva sample for purposes of DNA testing is a search within meaning of Fourth Amendment because one has a reasonable expectation of privacy in the interior of one's mouth).

131. *Nicolosi*, 885 F. Supp at 55. *But see In re Nontestimonial Order Directed to R.H.*, 762 A.2d 1239, 1244 (Vt. 2000) (indicating that by talking and yawning, the inside of a person's mouth is exposed to the public view, and as a result, swabbing the inside of the mouth is a significantly less intrusive means than piercing the skin to draw blood).

132. *Nicolosi*, 885 F. Supp at 55.

133. Victor Walter Weedn and John W. Hicks, United States Dep't of Justice, Nat'l Institute of Justice. *The Unrealized Potential of DNA Testing* 1–2 (1998) at <http://www.ncjrs.org/pdffiles/170596.pdf> (last visited Feb. 24, 2005); see also Shaila K. Dewan, *As Police Extend Use of DNA, a Smudge Could Trap a Thief*, N.Y. TIMES, May 26, 2004 (explaining that there is no simple way to avoid leaving DNA evidence at the scene of a crime because it is present in epidermal cells, and as a result, a new crime lab planned for

urine, hair, skin cells, and various other biological substances.<sup>134</sup> If DNA is collected through inspection of material on the surface of the body or through biological material discarded from the body, it is arguable that there is no search for purposes of the Fourth Amendment.<sup>135</sup> The following cases support the claim that no one can assert Fourth Amendment protection of privacy in biological material that is discarded or exposed to the public.<sup>136</sup>

i. *Skin scrapings*

DNA may also be obtained by “applying a sticky patch to the skin on an individual’s forearm for a moment” to collect epidermal cells that contain DNA.<sup>137</sup> Such a procedure involves no penetration below the skin.<sup>138</sup> Collecting DNA using this method involves merely a cursory inspection of the outer layer of one’s skin, and therefore imposes only a mild intrusion on one’s bodily integrity.<sup>139</sup> The cells are on the outside of the body, where they are visible to the world in much the same way that fingerprints are exposed to the public.<sup>140</sup> If a DNA profile could successfully be generated using this procedure, which appears to be no more intrusive than fingerprinting, it is likely a court will find no search in the collection of the cells.<sup>141</sup> There exists a “constitutional difference between invasive proce-

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New York City expects to generate profiles culled from as little as 6 cells’ worth of genetic material collected at the scene of nearly every crime committed in the city, including non-violent property offenses like home burglaries and auto thefts).

134. *Id.* at 2.

135. *Cf.* *United States v. Dionisio*, 410 U.S. 1, 14–15 (1973) (holding that a person’s voice is commonly exposed to the public, and because a person has no expectation of privacy in those physical characteristics which are commonly exposed to the public, there is no search involved in compelling a defendant to submit to a voice exemplar).

136. *Cf.* *California v. Greenwood*, 486 U.S. 35, 37 (1988). The Supreme Court used this reasoning in *Greenwood* holding that the Fourth Amendment does not prohibit “the warrantless search and seizure of garbage left for collection outside the curtilage of a home.” The Court commented that:

[i]t is common knowledge that plastic garbage bags left on or at the side of a public street are readily accessible to animals, children, scavengers, snoops, and other members of the public . . . . Moreover, respondents placed their refuse at the curb for the express purpose of conveying it to a third party, the trash collector, who might himself have sorted through respondents’ trash or permitted others, such as the police, to do so.

137. Ben Quarmby, *The Case for National DNA Identification Cards*, 2003 DUKE L. & TECH. REV. 2, ¶ 20 (2003) (citing David H. Kaye et al., *Is a DNA Identification Database in Your Future?* 16 CRIM. JUST. 4, 9 (Fall 2001)).

138. *Id.*

139. *Id.*

140. Kaye et al., *supra* note 137 (suggesting that the constitutional analysis for the collection of epidermal cells may be the same as that for fingerprints because both skin cells and appendages are exposed to the public).

141. *Id.* at 9–10 (explaining that because the Supreme Court’s decision in *Kyllo v. United*

dures of the body that necessitate penetrating the skin, and an examination or recording of physical attributes that are generally exposed to public view.”<sup>142</sup> Skin cells, much like fingerprints, are an identifying feature constantly exposed to the public.<sup>143</sup> As such, “[a]n individual cannot hold the same expectation of privacy . . . that he does for his internal properties.”<sup>144</sup> Although no court has addressed whether obtaining skin cells from an area of the body that is exposed to the public is a search, it is likely that when confronted with the issue, the court will find there to be no search.<sup>145</sup>

It is important to note that a different conclusion would result if the skin cells were collected from an area of the body shielded from public view.<sup>146</sup> In *Cupp v. Murphy*, the Supreme Court held that the removal of skin cells from underneath one’s fingernail is a search.<sup>147</sup> In *Cupp*, the defendant was suspected of strangling his wife to death, and the police suspected that traces of skin, blood, and fabric from the victim would be found beneath the fingernails of the defendant.<sup>148</sup> When the defendant voluntarily submitted to questioning, the police collected skin scrapings from under the defendant’s fingernails.<sup>149</sup> The Court held that because “the search of the respondent’s fingernails went beyond mere ‘physical characteristics . . . constantly exposed to the public,’” there was a search which warranted a Fourth Amendment analysis.<sup>150</sup>

## ii. Hair

Hair can be analogized to fingerprints as well.<sup>151</sup> Just as one’s fingerprints are exposed to the public, so is hair.<sup>152</sup> As a result, many courts find

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States, 533 U.S. 27 (2001), is limited to intrusions that invade the privacy of one’s *home*, it might not constitute a Fourth Amendment search to “take from the surface of a person’s skin cells that are constantly being shed and to analyze the DNA they contain”).

142. 345 F.3d 1095, 1100 (9th Cir. 2003), *vacated and reh’g en banc granted*, 354 F.3d 1000 (9th Cir. 2004), *en banc, subsequent appeal at* United States v. Kincade, 379 F.3d 813 (9th Cir. 2004). Note that while the 2003 *Kincade* decision was overturned on appeal, the Ninth Circuit Court of Appeals did not disagree with the trial court’s presentation and analysis of case law on what constitutes a Fourth Amendment search. United States v. Kincade, 379 F.3d 813, 821 (9th Cir. 2004).

143. *Cf. Id.*

144. *Id.*

145. Kaye et al., *supra* note 137, at 10.

146. *Cf. Cupp v. Murphy*, 412 U.S. 291, 295 (1973).

147. *Id.*

148. *Id.* at 292.

149. *Id.*

150. *Id.* at 295 (quoting United States v. Dionisio, 410 U.S. 1, 14 (1973)).

151. See, e.g., Coddington v. Evanko, 2004 WL 2416429, at \*2 (3rd Cir., Oct. 29, 2004) (concluding that there is no greater expectation of privacy with respect to hair than there is to fingerprints because both are “subject to public view”).

152. *Id.*

that collecting hair samples from an individual's scalp or face is not a search for purposes of the Fourth Amendment.<sup>153</sup> The Court of Appeals for the Third Circuit in *In re Grand Jury Proceedings (Mills)* addressed whether collecting a hair sample is a search.<sup>154</sup> When the defendant in *Mills* was directed by a grand jury to furnish hair samples from his scalp and face to aid in the investigation of a bank robbery, the court was forced to decide whether the cutting of hair strands was "more akin to fingerprinting and voice and handwriting exemplars which have been held outside the ambit of Fourth Amendment protection or whether it is more closely aligned with the extraction of blood samples or fingernail scrapings which have been subjected to Fourth Amendment analysis as to reasonableness."<sup>155</sup> The court ultimately held that hair, like fingerprints, can be "subject to compelled disclosure by the grand jury without implicating the Fourth Amendment."<sup>156</sup>

Again, it is important to remember that the area of the body from which the hair is collected is important for a Fourth Amendment analysis.<sup>157</sup> If the hair is collected from a private area of the body concealed from public view, privacy interests are implicated and a search will result.<sup>158</sup> For example, in *In re Will County Grand Jury*, a grand jury subpoenaed pubic hair samples from the defendant without establishing probable cause. The Illinois court held that "the demand for pubic hair represents a considerable intrusion into personal privacy and is, without the justification of probable cause, an indignity to the individual subpoenaed."<sup>159</sup>

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153. See, e.g., *In re Grand Jury Proceedings Involving Vickers*, 38 F. Supp. 2d 159, 165 (D.N.H., 1998) (holding that grand jury's request for hair samples, like fingerprints, does not implicate respondents' Fourth Amendment rights); *In re Grand Jury Proceedings Involving Eve Rosahn*, 671 F.2d 690, 695 (2d Cir. 1982) (holding that a grand jury's subpoena of fingerprints, handwriting exemplars, and hair samples need not be supported by a search warrant or a showing of reasonableness).

154. 686 F.2d 135, 139 (3rd Cir. 1982).

155. *Id.*

156. *Id.* at 140. Note that the court limited its holding to the sampling of a *dead* hair strand: "We need not decide whether the result might be different were the hair root requested, since the hair root, unlike the exposed hair, is a living structure. At times, constitutional distinctions are as thin as a razor's edge." *Id.*

157. *Coddington v. Evanko*, 2004 WL 2416429, slip op. at \*2 (3rd Cir., Oct. 29, 2004) (indicating that the difference between sampling hair from the root and sampling from the surface of the body is "extremely important in a Fourth Amendment context because, while the exposed portion of hair is above the body surface, on public view and not deserving of Fourth Amendment protection, the hair root, like blood and fingernail scrapings, is 'below the body surface . . . , not on public view' and may well be deserving of such protection." (quoting *Mills*, 686 F.2d at 139)).

158. *In re Will County Grand Jury*, 604 N.E.2d 929, 936 (Ill. 1992); see also *Bouse v. Bussey*, 573 F.2d 548, 550 (9th Cir. 1977) (when police officer unzipped defendant's jail uniform and forcibly pulled a sample of pubic hair from his person, the resulting intrusion "was sufficiently severe to constitute a search").

159. *Will County*, 604 N.E.2d at 936.



Notwithstanding the degree of intrusion that may or not be imposed through DNA sampling, it is important to consider whether a subsequent analysis of one's DNA profile constitutes a search. The following section addresses precisely this issue.

c. Whether generating a DNA profile is a search

In light of technological advancements, DNA may soon be extracted with virtually no bodily intrusion.<sup>160</sup> If the government could obtain one's DNA without intrusion upon one's bodily integrity, then under the reasoning of prior court precedent, arguably no Fourth Amendment search would exist.<sup>161</sup> Yet, even if a bodily intrusion is not required to obtain the sample, extensive chemical analysis is needed for the identifying features of DNA to be evident.<sup>162</sup> Whether the subsequent chemical analysis reveals information in which one maintains a reasonable expectation of privacy ultimately determines whether the subsequent analysis constitutes a search.<sup>163</sup>

The first case to address whether chemical analysis of one's biological material constitutes a search is *Skinner v. Railway Labor Executives' Association*.<sup>164</sup> In *Skinner*, the United States Supreme Court upheld federal regulations which required railroad officials to collect breath and urine samples from employees involved in railway accidents for drug and alcohol testing.<sup>165</sup> The Court recognized that unlike the blood testing procedure in *Schmerber*, the procedures employed by the railway organization to collect the biological samples did not necessitate a physical intrusion into the body.<sup>166</sup> Nevertheless, the Court reasoned that the subsequent chemical analysis of the sample "to obtain physiological data is a further invasion of

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160. See, e.g., Roland A.H. von Oorschot & M.K. Jones, *DNA Fingerprints from Fingerprints*, 387 NATURE 767 (1997), available at [http://www.nature.com/cgitaf/DynaPage.taf?file=/nature/journal/v387/n6635/abs/387767a0\\_fs.html](http://www.nature.com/cgitaf/DynaPage.taf?file=/nature/journal/v387/n6635/abs/387767a0_fs.html) (last visited Feb. 26, 2005) (describing techniques for obtaining DNA by amplifying oil skin deposited by making a fingerprint).

161. *Shelton v. Gudmanson*, 934 F. Supp 1048 (W.D. Wis. 1996) (suggesting cheek swabs could be held to be more like fingerprints and may not even constitute a search given the minimal nature of the intrusion that a cheek swab entails).

162. Nat'l Comm. on the Future of DNA Evidence, Nat'l Inst. of Justice, United States Dep't of Justice, *The Future of Forensic DNA Testing: Predictions of the Research and Development Working Group* 17-20, Nov. 2000, at <http://www.ncjrs.org/pdffiles1/nij/183697.pdf> (last visited Feb. 26, 2005).

163. See Quarmby, *supra* note 137 (indicating that the ultimate consideration in determining whether removal or inspection of bodily material constitutes a search is the nature of the information that can be derived from DNA data).

164. 489 U.S. 602, 616 (1989).

165. *Id.* at 613.

166. *Id.* at 617.

the tested employee's privacy interests."<sup>167</sup> The Court emphasized that chemical analysis of a urine sample "can reveal a host of private medical facts about an employee," and "a breathalyzer test . . . implicates similar concerns about bodily integrity."<sup>168</sup> As a result, even though no physical intrusion was involved in collecting biological material from the railway employees, the subsequent chemical analysis constituted a search for Fourth Amendment purposes.<sup>169</sup>

*Skinner* stands for the proposition that an analysis of biological material that reveals no private information would not qualify as a search for purposes of the Fourth Amendment.<sup>170</sup> Applying the reasoning of *Skinner*, it is no surprise that the process of collecting and analyzing fingerprints does not amount to a search.<sup>171</sup> In *Davis v. Mississippi*, the Court held that the process of obtaining a fingerprint is not subject to the Fourth Amendment because it "involves none of the probing into an individual's private life and thoughts that marks an interrogation or search."<sup>172</sup> Unlike the urinalysis employed in *Skinner*, a fingerprint reveals no private information, but instead exists solely for identification purposes.<sup>173</sup> The Indiana Supreme Court in *Palmer v. State* explained that because "fingerprints are an identifying factor readily available to the world at large," the process of obtaining a fingerprint is "not the type of intrusion, regardless of its use as evidence or for identification purposes, protected by the Constitution."<sup>174</sup> Under Supreme Court precedent, it appears that if a DNA profile contains only unique identifiers, like a fingerprint, it is arguable that no Fourth Amendment search results from the analysis of one's DNA profile.<sup>175</sup> This is so

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167. *Id.* at 616.

168. *Id.* at 616-17.

169. *Id.* at 617.

170. 489 U.S. at 617.

171. *Hayes v. Florida*, 470 U.S. 811, 814 (1985) (applying *Davis* to hold that "fingerprinting, because it involves neither repeated harassment nor any of the probing into private life and thoughts that often marks interrogation and search" does not constitute a Fourth Amendment search while the actual detention for purposes of obtaining the fingerprints is subject to the Fourth Amendment); *Davis v. Mississippi*, 394 U.S. 721, 727 (1968) (indicating that while the actual process of obtaining fingerprints is not a search, detaining an individual for the purpose of obtaining fingerprints is a seizure for purposes of the Fourth Amendment).

172. 394 U.S. at 727.

173. *Id.*

174. 679 N.E.2d 887 (Ind. 1997) (holding that the warrantless acquisition of defendant's fingerprints during his trial did not constitute a Fourth Amendment search).

175. *State v. Hauge*, 79 P.3d 131, 145 (Haw. 2003) (holding that no privacy interest exists in either a DNA sample or profile, and as a result, uploading the defendant's DNA profile into the state convicted offender DNA database does not amount to a search); *Bickley v. State*, 489 S.E.2d 167, 170 (Ga. App. 1997) (indicating that DNA profiles are like fingerprints which are maintained on file by law enforcement authorities for use in further investigations; consequently, sharing the DNA evidence between law enforcement in the state data-

because the Court does not consider one to have a reasonable expectation of privacy in one's identity.<sup>176</sup>

2. *Whether a Warrantless Search of an Arrestee's DNA is Reasonable*

Whether DNA sampling amounts to a search is only a part of the traditional Fourth Amendment analysis.<sup>177</sup> The second half of the analysis is to determine whether such a search is reasonable.<sup>178</sup> The reasonableness of a search depends on governmental compliance with the Warrant Clause, which requires authorities to demonstrate probable cause to a neutral magistrate before proceeding with a search.<sup>179</sup> In general, if no warrant is obtained, then any subsequent search is per se unreasonable and in violation of the Fourth Amendment.<sup>180</sup> The United States Supreme Court, however, has created an exception whereby law enforcement officers may lawfully conduct a search without a warrant, without probable cause, and without individualized reasonable suspicion: A search is not per se unreasonable if the government's interest in conducting the search outweighs the degree of intrusion upon an individual's privacy.<sup>181</sup> Consequently, the government needs neither a warrant nor individualized suspicion to conduct a search when the balance of interests weighs in the government's favor.<sup>182</sup> Applying this balancing test, the Court has condoned several instances in which the government may constitutionally conduct warrantless and suspicionless searches.<sup>183</sup> Whether DNA sampling falls into one of the carved exceptions

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base did not require a second search warrant).

176. *Hiibel v. Sixth Judicial Dist.*, 542 U.S. 177 (2004) (holding that a police officer is free to ask a person for identification without implicating the Fourth Amendment, for interrogation relating to one's identity or a request for identification by the police does not, by itself, constitute a Fourth Amendment search or seizure).

177. *United States v. Kincade*, 379 F.3d 813, 821 (9th Cir. 2004).

178. *Id.* at 822; *see also* *Skinner v. Ry. Labor Exec. Ass'n* 489 U.S. 602, 619 (1989) (noting that the "Fourth Amendment does not proscribe all searches and seizures, but only those that are unreasonable"). Generally, the reasonableness of a search is judged by balancing the intrusion on an individual's Fourth Amendment rights against the strength of the government's interest in pursuing the search. *Id.*

179. *Kincade*, 379 F.3d at 822 (citing *United States v. United States Dist. Ct.*, 407 U.S. 297, 315-16 (1972)).

180. *Katz v. United States*, 389 U.S. 347, 357 (1967).

181. *Skinner*, 489 U.S. at 624.

182. *Id.*

183. First, the Court permits suspicionless searches at the United States border, in prisons, and in airports and government buildings.; *Chandler v. Miller*, 520 U.S. 305, 323 (1997) (accepting that suspicionless searches conducted at "airports and at entrances to courts and other official buildings" do not violate the Fourth Amendment due to the substantial threat to public safety at these locations"); *Hudson v. Palmer*, 468 U.S. 517, 526 (1983) (indicating that the "Fourth Amendment proscription against unreasonable searches does not apply

to the warrant requirement, however, is beyond the scope of this discussion. Instead, the following discussion presents the traditional Fourth Amendment test of reasonableness by assessing, on the one hand, the degree to which a search of an arrestee's DNA intrudes upon his or her privacy, and on the other hand, the degree to which DNA sampling is necessary for the promotion of legitimate governmental interests.<sup>184</sup> The following sections address the interests implicated when the government collects DNA in the form of a blood sample from individuals arrested and charged with a crime. Part (a) considers the government's need in collecting DNA samples from individuals arrested and charged with a crime, and (b) considers the privacy interests implicated when the government includes DNA profiles from individuals who have yet to be convicted of a crime into its national DNA database, CODIS.

a. Government's interests in DNA sampling

The government unquestionably has a strong interest in developing and maintaining a database of DNA samples.<sup>185</sup> This interest is due in no small part to the critical role DNA databases play in the criminal justice system.<sup>186</sup> The following sections explore the government's interest in identifying suspects, exonerating the innocent, and preventing recidivist offenders from committing new crimes. Finally, this section concludes with a brief explanation of how CODIS promotes efficacy within the criminal justice system.

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within the confines of the prison cell"); *United States v. Ramsey*, 431 U.S. 606, 616 (1977) (holding that suspicionless searches made at the border are reasonable in light of the government's need to protect itself from individuals "crossing into this country"). Second, the Court permits suspicionless governmental intrusions that are deemed to be "administrative" in nature. *City of Indianapolis v. Edmond*, 531 U.S. 32, 37 (2000) ("We have also allowed searches for certain administrative purposes without particularized suspicion of misconduct"); *New York v. Burger*, 482 U.S. 691, 702 (1987) (indicating that administrative searches are conducted for the purpose of inspecting businesses and industries for compliance with safety and regulatory standards). Third, the Court created the "special needs" exception to permit suspicionless searches that are conducted as part of a government sponsored program that is designed to serve "special needs, beyond the normal need for law enforcement." *Edmond*, 531 U.S. at 36 (invalidating roadside checkpoint program designed to discover illegal drug trafficking); *see also* *Bd. of Educ. v. Earls*, 536 U.S. 822, 833 (2002) (where students submitted to compulsory urine testing to prevent health and safety risks from drug use and "the test results are not turned over to any law enforcement authority" there is no Fourth Amendment violation).

184. *Skinner*, 489 U.S. at 619; *see also* *Wyo. v. Houghton*, 526 U.S. 295 (1999); *Vernonia Sch. Dist. 47j v. Acton*, 515 U.S. 646, 653 (1995).

185. *See* Justice for All Act of 2004, H.R. REP. NO. 108-711 at 2 (2004).

186. *Id.*

i. *Identifying suspects*

An important contribution of the CODIS system is that it allows DNA evidence recovered from a crime scene to be linked to an identifiable perpetrator.<sup>187</sup> The new and powerful CODIS database helps solve crimes that have remained unsolved for decades.<sup>188</sup> As of December 2003, there were 542,700 unsolved homicide, rape, and property cases with possible biological evidence either in the possession of local law enforcement or backlogged in a state forensic database.<sup>189</sup> Using the CODIS database, this biological evidence will ultimately be converted into a DNA profile and compared with the convicted offender index to search for a match in the hope of identifying a suspect.<sup>190</sup> The DNA profile from the crime scene is run against the 93,956 DNA profiles from other crime scenes in the forensic index to see if other crimes may be linked together.<sup>191</sup> Any "hits" lead to notification of the appropriate law enforcement agencies so that they may share their information.<sup>192</sup> As of December 2004, CODIS has produced over 19,000 hits assisting in more than 20,700 investigations forty-seven states.<sup>193</sup> The "hits" resulting from a match in CODIS identify approximately one offender for every 1,000 samples contained in CODIS.<sup>194</sup> These statistics demonstrate the degree to which the CODIS system streamlines the criminal justice system in the investigative process by identifying a suspect almost immediately.<sup>195</sup>

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187. *CODIS*, *supra* note 26; see also Christina Lewis, COURT TV, *Solving the Cold Case: Time, DNA and Ingenuity Can Help*, at

[http://www.court tv.com/news/hiddentraces/sidebars/success\\_stories.html](http://www.court tv.com/news/hiddentraces/sidebars/success_stories.html) (last visited Feb. 27, 2005) (offering a survey of "cold cases" that have been solved using the CODIS system).

188. *Id.*

189. Division of Governmental Studies and Services Washington State University and Smith Alling Lane, P.S., *supra* note 27, at 3.

190. As of December 2004, there were 2,038,470 convicted offender profiles with which to compare the evidence. Fed. Bureau of Investigation, *NDIS Statistics*, at <http://www.fbi.gov/hq/lab/codis/clickmap.htm> (last visited Nov. 6, 2004).

191. *Id.*

192. *CODIS*, *supra* note 26. The Virginia Department of Criminal Justice Services offers a succinct definition of a database hit: "A hit occurs when DNA analysis of a crime scene sample with no suspect matches a profile in a database of previously convicted offenders, a database of samples from those individuals arrested for specified crimes, or a database of other crime scene profiles." at <http://www.dcjs.virginia.gov/forensic/information/dna.cfm> (last visited Feb. 22, 2005).

193. Fed. Bureau of Investigation, *Investigations Aided*, at <http://www.fbi.gov/hq/lab/codis/aidedmap.htm> (last visited Feb. 27, 2005).

194. Christopher H. Asplen, *From Crime Scene to Court Room: Integrating DNA Technology into the Criminal Justice System*, 83 JUDICATURE 144, 147 (1999). According to Mr. Asplen, the Executive Director of the National Commission on the Future of DNA Evidence, some states experience even a higher hit rate. *Id.*

195. Logic dictates that the FBI only achieves such great results from the CODIS system

Perhaps the most effective demonstration of the government's interest in DNA sampling can be seen through a portrayal of the real life experiences of those whose lives have been changed as a result of a DNA match generated by the CODIS database. The following sections offer case studies that illustrate CODIS's ability to identify the guilty and exonerate the innocent. To begin, the following excerpt shows the powerful sense of closure and relief that a DNA match can bring to a victim of violent crime:

On a Friday afternoon in March 1989, Debbie Smith was abducted from her home by a man she had never seen before. Mrs. Smith's assailant forced her from her kitchen to the woods behind her home and rapes her. Before leaving the scene of the crime, the rapist threatened Mrs. Smith, saying he knew where she lived and he would kill her if she ever told anyone what had happened. The local police department developed a suspect in the case, and sent a sample of his blood, along with the evidence, to their forensic crime laboratory. Five years later, in 1994, the county where Debbie resided experienced an outbreak of sexual assault and rape crimes. The police developed a suspect in this case, and sent a sample of his blood to the laboratory. The police also resubmitted the evidence from Debbie Smith's case, thinking the same subject may be responsible. This time, the laboratory performed DNA analysis. Again, the suspect was excluded. But now, the laboratory had developed a DNA profile of the man who raped Mrs. Smith. When processed through the recently implemented Virginia DNA databank, the DNA sample of her assailant collected years earlier was matched with a DNA profile of an inmate in a Virginia prison who was currently serving a 161 year sentence. When informed that the man who raped her had been identified, Debbie Smith said, "I feel like a weight has been lifted from my shoulders."<sup>196</sup>

This is a compelling story, and there are many others just as compelling.<sup>197</sup> Debbie Smith's success story and others like it are a direct result of

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when participating state and federal forensic laboratories actually upload DNA profiles into the CODIS database. A recent investigation into the Denver Police Department reveals that a DNA sample that might have identified an alleged serial rapist was not matched to the suspect because his DNA profile was never uploaded to CODIS. Sean Callebs, *Police Admit Computer Mix-up in Serial Rape Case*, Cnn.com (Feb. 21, 2005), at <http://www.cnn.com/2005/LAW/02/21/colorado.rapes/index.html> (last visited Feb. 25, 2005). While the error has been determined to be a result of a "computer glitch," a news report indicates that the error occurred when an FBI contractor attempted to transfer data to a new computer server. *Id.* Not only did the serial rapist's DNA profile not get uploaded, but neither did many other DNA profiles. *Id.*

196. Niezgoda & Brown, *supra* note 40. Note portions of this story have been deleted from the original material.

197. Fed. Bureau of Investigation, Science and Technology in the Name of Justice Part 2, *FBI DNA Database Passes an Important Milestone, Recent CODIS Success Stories*, at <http://www.fbi.gov/success.htm> (last visited Nov. 6, 2004); see also United States Dep't of

the nationwide acceptance of the CODIS system.<sup>198</sup> After all, the CODIS database is most effective as a crime fighting tool if each state contributes offender profiles.<sup>199</sup> The more samples in the database with which to compare, the faster law enforcement can identify a perpetrator.<sup>200</sup>

ii. *Exonerating the innocent*

By the same token, the government also has an interest in preventing and correcting erroneous convictions.<sup>201</sup> A DNA hit generated from the CODIS database can be used to clear suspects and exonerate persons mistakenly accused or convicted of crimes.<sup>202</sup> The following excerpt tells the story of Ronald Cotton, who was exonerated by a CODIS match after serving over ten years in prison:

Ronald Cotton was accused of raping two women during the summer of 1984. Both victims were taken to the hospital, where full rape examination kits were completed. The first victim, 22-year-old Jennifer Thompson, described her attacker as a tall African-American man in his early 20s. Police collected photographs of area men meeting that description, including 22-year-old Ronald Cotton. Thompson selected Cotton from police photos as her rapist. At a physical lineup of suspects, Thompson again selected Cotton. In August 1984, police arrested Cotton and took him into custody. In January 1985, Cotton was convicted of Thompson's rape and sentenced to life in prison. That verdict, however, was overturned, and a new trial was ordered. Cotton was optimistic given a crucial discovery he had made about one of his fellow inmates, Bobby Poole—a tall African-American young man also convicted of rape who bore a strong resemblance to the composite sketch used in Cotton's case. Poole had reportedly bragged to inmates that he had committed the rapes for which Cotton was serving time. At Cotton's second trial, both vic-

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Justice, Fed. Bureau of Investigation, *The FBI's Combined DNA Index System—CODIS*, *supra* note 26.

198. See Justice for All Act of 2004, H.R. No. 108-711 at 2 (Sept. 30, 2004).

199. WashingtonPost.com, *Inside the FBI: Forensic Science Technology With John Behun Unit Chief for Combined DNA Integration System (CODIS)*, (May 6, 2003), at [http://discuss.washingtonpost.com/wp-srv/zforum/03/r\\_nation\\_fbi050603.htm](http://discuss.washingtonpost.com/wp-srv/zforum/03/r_nation_fbi050603.htm) (CODIS receives 45,000 to 50,000 new DNA profiles each month.) *Id.*

200. *Id.*; see also John P. Cronan, *The Next Frontier of Law Enforcement: A Proposal for Complete DNA Databanks*, 28 AM. J. CRIM. L. 119, 134 (2000) (indicating that "the effectiveness of the federal databank rests on the size of the linked state databanks.").

201. See Justice for All Act of 2004, H.R. REP NO. 108-711 at 3 (Sept. 30, 2004).

202. *Id.* at 2. Note that arrestees benefit from the CODIS database because "In about 25% of the cases submitted to the FBI lab during the past decade, the crime scene DNA does not match the DNA of the suspect. In other words, hundreds of arrested persons are exonerated before trial each year by DNA test results." Innocence Project, DNA News, *Post Arrest DNA Exonerations*, at <http://www.innocenceproject.com/dnanews/index.php> (last visited Feb. 27, 2005).

tims testified against him, the jury did not believe that Poole was the real assailant, and the court withheld evidence of Poole's alleged confessions. Convicted of both rapes, Cotton received two life sentences plus 55 years in prison. In 1994 Cotton learned about DNA testing (a procedure unavailable at the time of his trials). He filed and won a motion for DNA testing. The state DNA database matched the DNA samples taken from the victims to Bobby Poole. On June 30, 1995, almost 11 years after the rapes and 10 1/2 years after being taken into custody, Ronald Cotton was cleared of all charges and released from prison.<sup>203</sup>

DNA has the power to exonerate others like Ronald Cotton already serving time for a crime they did not commit.<sup>204</sup> More than 230 wrongfully convicted and imprisoned individuals have been exonerated and released from prison, 130 of which were exonerated by DNA evidence.<sup>205</sup> These statistics demonstrate that DNA evidence in general, and CODIS in particular, can be powerful tools to protect the innocent. Undoubtedly, the criminal justice system, if not the government itself, has an overwhelming interest in just convictions.

### iii. *Stopping recidivists*

As a result of CODIS's success in identifying perpetrators and exonerating the innocent, the National Institute of Justice commissioned an independent study<sup>206</sup> to determine exactly how powerful CODIS could be as a law enforcement tool.<sup>207</sup> As part of its charge, the commission conducted case studies on crimes that would have been prevented if CODIS had been

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203. United States Dep't of Justice, Office of Justice Programs, Kathryn M. Turman, *Understanding DNA Evidence: A Guide for Victim Service Providers* (Apr. 2001) at [http://www.ojp.usdoj.gov/ovc/publications/bulletins/dna\\_4\\_2001/dna11\\_4\\_01.html](http://www.ojp.usdoj.gov/ovc/publications/bulletins/dna_4_2001/dna11_4_01.html) (last visited Feb. 27, 2005).

204. *Id.*

205. Frontline, *Burden of Innocence*, May 1, 2003, at <http://www.pbs.org/wgbh/pages/frontline/shows/burden/etc/faqsreal.html#2> (last visited Feb. 27, 2005); see generally Innocence Project, at [www.innocenceproject.org](http://www.innocenceproject.org). This organization is a non-profit legal clinic that only handles cases where post-conviction DNA testing of evidence can yield conclusive proof of innocence. *Id.* The website maintains a running total of all exonerations accomplished through DNA testing. *Id.*

206. The study was conducted by Smith Alling Lane and Washington State University and was presented to the National Institute of Justice on Dec. 12, 2003, as the *National Forensic DNA Study Report*. The report is at [http://www.ojp.usdoj.gov/nij/pdf/dna\\_studyreport\\_final.pdf](http://www.ojp.usdoj.gov/nij/pdf/dna_studyreport_final.pdf). The study indicates that more than 165 serious crimes, including at least 116 rapes and 22 murders could have been prevented if every state had begun taking DNA samples from all convicted felons in 1990. *Id.*

207. United States Dep't of Justice, Nat'l Institute of Justice, *DNA Backlog Reduction Program Case Studies of Preventable Crimes*, at [http://www.ojp.usdoj.gov/nij/sciencetech/dna\\_prevent/welcome.html](http://www.ojp.usdoj.gov/nij/sciencetech/dna_prevent/welcome.html) (last visited Feb. 27, 2005).



implemented at the time the suspect was originally brought into custody.<sup>208</sup> One of the case studies offers the story of how four rapes could have been prevented in Arkansas with the assistance of CODIS:

Between 1995 and 1997, seven rapes were committed against women and young girls across four counties in Arkansas. In at least four of the cases, the victims were assaulted after being stopped by a man posing as a police officer, whom newspapers subsequently dubbed the "Blue Light Rapist." In 1997, a suspect was identified as the suspected rapist through the assistance of one of his acquaintances who was working with law enforcement. Subsequent DNA testing linked him to several of the rapes, with other evidence and victim descriptions tying in the remaining cases. The suspect had been convicted in 1996 on charges of theft by receiving a stolen rifle.<sup>209</sup>

Had the blue light rapist's DNA sample been entered into the CODIS system upon arrest in 1996 for the theft offense, up to five of the subsequent rapes could have been prevented.<sup>210</sup> The police would have had the suspect's DNA profile on file in the CODIS database in 1996, and as a result, they would have been able to identify him using the crime scene evidence collected from the first victim.<sup>211</sup>

It is precisely such repeat offenders, like the blue-light rapist, that the CODIS database is designed to identify and prevent from committing additional offenses.<sup>212</sup> A recent study on recidivism found that 67.5% of released prisoners were re-arrested and charged with a new offense within three years of their release.<sup>213</sup> CODIS targets these repeat offenders by having their genetic identity permanently included in the database for future

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208. *Id.*

209. Division of Governmental Studies and Services Washington State University and Smith Alling Lane, P.S., *supra* note 27, at 50.

210. *Cf. id.* Note that this Report offers case studies of crimes that could have been prevented if the repeat offender's DNA profile had been uploaded into the CODIS system at the time of his or her first conviction. Whether the DNA was obtained from the offender upon arrest or first conviction, however, leads to the same conclusion: The blue light rapist's DNA profile would have been obtained at an early stage that would have enabled law enforcement to identify him by name thereby preventing him from committing additional rapes.

211. *Id.*

212. *Id.* at 47.

213. Patrick A. Langan & David D. Levin, *Recidivism of Prisoners Released in 1994*, Special Report, Washington D.C. United States Dep't of Justice, Bureau of Statistics, Jan. 2002, NCJ 191191:1. This study tracked 272,111 released prisoners from 15 states. The study found that 29.9% of the released prisoners were rearrested for a new offense within six months of release. The study also found the offenders accounted for 4.1 million arrest charges prior to their most recent incarceration and were responsible for another 744,000 arrest charges within three years of release. *Id.*

comparison with DNA left at crimes scenes.<sup>214</sup> CODIS's ability to identify recidivist offenders furthers the government's interest in crime prevention.

iv. *Principles of efficacy*

Limiting the CODIS database to include only those individuals actually *convicted* of an offense impedes CODIS's ability to identify perpetrators.<sup>215</sup> A recent study indicates that sixty-six percent of all individuals arrested and charged with a crime have a prior arrest record while only thirty-eight percent of them have at least one prior felony conviction.<sup>216</sup> Under the original provisions of the DNA Act of 1994, only the DNA profiles from those thirty-eight percent who have a prior conviction would make up CODIS's searchable data.<sup>217</sup> Given this structure, the database is of no help in investigating crimes committed by persons not previously convicted of an offense. Because the majority of individuals ultimately arrested and charged have no prior conviction, it appears that CODIS would be more effective as an investigative tool if it were expanded to include DNA profiles from individuals arrested and charged with a crime.<sup>218</sup> Ultimately, if DNA profiles are collected from individuals upon arrest, CODIS will provide "investigators with the tools they need to identify a suspect and remove the threat to public safety before the same perpetrator can re-offend."<sup>219</sup>

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214. Cf. Division of Governmental Studies and Services Washington State University and Smith Alling Lane, P.S, *supra* note 27, at 47. Again, note that this report offers case studies of crimes that could have been prevented if the repeat offender's DNA profile had been uploaded into the CODIS system at the time of his or her first *conviction*. Nevertheless, whether the DNA was obtained from the offender upon arrest or first conviction leads to the same conclusion: Law enforcement would be able to identify the repeat offender using DNA evidence collected from the first crime scene thereby preventing the commission of additional crimes.

215. D.H. Kaye, *DNA Identification Databases: Legality, Legitimacy, and the Case for Population-Wide Coverage*, 2003 WIS. L. REV. 413, 451 (2003).

216. Brian A. Reaves, Bureau of Justice Statistics, *Felony Defendants in Large Urban Counties*, 1994, Executive Summary, at 2 (1998) (indicating that more than half of felony defendants have prior felony records while at least two-thirds of all defendants have a prior arrest record).

217. 42 U.S.C. § 14132(a)(1) (2004). This is so because the original DNA Act of 1994 limited the CODIS database to include DNA profiles to only convicted offenders. *Id.* Note that the Justice for All Act of 2004 amended the provisions to include DNA profiles from individuals arrested and charged with an offense. 42 U.S.C. § 14132(a)(1)(B) (2005).

218. Kaye, *supra* note 215, at 451. Note, however, that in his article, Kaye argues for a comprehensive DNA database which would include DNA profiles from all individuals. *Id.* at 459. Kaye highlights that of those defendants prosecuted for serious felonies, at least one-third have no prior arrest record. Therefore, Kaye argues that to be truly effective, the database should be transformed to a population-wide database. *Id.* at 460.

219. Division of Governmental Studies and Services Washington State University and Smith Alling Lane, P.S, *supra* note 27, at 47.

Perhaps the best proof that CODIS would be more effective if it was expanded to include DNA profiles from arrestees can be illustrated through the success of United Kingdom's database. In the United Kingdom, police take DNA profiles from all persons arrested for imprisonable offenses and upload them into its DNA database.<sup>220</sup> As of March 2003, the U.K. reported to be experiencing a forty percent hit rate.<sup>221</sup> In other words, four out of ten new crime scene samples checked against the database will match a previously recorded profile of an offender or suspect.<sup>222</sup> In addition, the U.K. reports that in one month, the database typically links suspects to fifteen murders, thirty-one rapes and 770 motor vehicle, property and drug crimes.<sup>223</sup> Given these statistics, it is clear that CODIS's ability to solve crimes could be greatly enhanced if the database were expanded to include profiles of arrestees charged with a crime.

It is important to note, however, that a CODIS hit does not necessarily lead to the conclusion that the identified suspect committed the crime or even personally left the DNA evidence.<sup>224</sup> However, a CODIS match inevitably provides the prosecution with a stronger case.<sup>225</sup> Strong DNA evi-

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220. Joshua Rozenberg, *Police Allowed to Keep DNA of Innocent People*, News.telegraph (July 23, 2004) at <http://www.telegraph.co.uk> (last visited Feb. 27, 2005) (offering the story of how a court in the U.K. ruled that police may lawfully obtain a DNA sample from anyone arrested for an imprisonable offense and permanently retain the sample for inclusion in the U.K.'s DNA database, even if the arrestee is never charged with a crime); see also Criminal Justice Act of 2003, 2003 Ch. 44 Part 1 § 10 (2003) at <http://www.hms.gov.uk/acts/acts2003/20030044.htm> (last visited Feb. 27, 2005) (formally amends U.K. law to allow for inclusion of arrestee DNA samples in its database).

221. Forensic Sci. Serv. Comm. Dep't. *The National DNA Database Annual Report 2002-2003* at 3, at [http://www.forensic.gov.uk/forensic/news/press\\_releases/2003/NDNAD\\_Annual\\_Report\\_02-03.pdf](http://www.forensic.gov.uk/forensic/news/press_releases/2003/NDNAD_Annual_Report_02-03.pdf) (last visited Feb. 27, 2005).

222. *Id.*

223. Forensic Science Serv. Comm. Dep't. *Press Release: National DNA Database Annual Report 2002-2003*, at [http://www.forensic.gov.uk/forensic\\_t/inside/news/list\\_press\\_release.php?case=16&y=2003](http://www.forensic.gov.uk/forensic_t/inside/news/list_press_release.php?case=16&y=2003) (last visited Feb. 27, 2005).

224. Samuel Lindsey et al., *Communicating Statistical DNA Evidence*, 43 JURIMETRICS J. 147,148 (2003) (explaining that "DNA analysis, by itself, can establish only that someone could be the source of a genetic evidentiary sample. Whether that person is in fact the source depends on the integrity of the analysis, the rarity of the DNA profile in question, and any other evidence implying that the suspect is or is not the source of the evidence.") For example, a DNA profile from an unknown suspect in a rape case could match with the victim's boyfriend, assuming that the boyfriend had a prior offense which resulted in his DNA being entered into the CODIS database. Division of Governmental Studies and Services Washington State University and Lane, *supra* note 27, at 41. If the victim is certain that her boyfriend was not the rapist, then the "hit" is not valuable to the investigation. *Id.*

225. Division of Governmental Studies and Services Washington State University and Lane, *supra* note 27, at 41.

dence is difficult to refute, and when defendants are confronted with a positive DNA match linking them to the crime scene, the likely result is an increase in guilty pleas.<sup>226</sup> Guilty pleas undoubtedly save the state and federal court systems time and money.<sup>227</sup> Even in cases involving pleas of not guilty, the availability of the CODIS database aids the criminal justice system by providing a reliable source of evidence.<sup>228</sup> DNA evidence is more reliable than eyewitness testimony in that it can place a defendant at the crime scene.<sup>229</sup> As a result, DNA evidence is frequently used in court as a substitute to eyewitness testimony, which has been proven to be misleading, or even false, at times.<sup>230</sup>

Although collecting DNA profiles from individuals arrested and charged with crimes may seem to promote efficacy within the criminal justice system and aid law enforcement efforts in crime prevention, one must not forget that the Fourth Amendment requires a balancing test before the government may conduct searches on individuals, including arrestees. An arrestee has privacy rights, and as a result, when examining the constitutionality of the Justice for All Act of 2004, the government's overwhelming interest in collecting DNA from arrestees must be balanced against the arrestee's privacy right in his or her DNA profile.

#### b. Privacy rights of arrestees

DNA sampling pursuant to the Justice for All Act implicates the arrestee's interest in bodily integrity in so far as it authorizes a physical intrusion into the body.<sup>231</sup> It is firmly established, however, that the "intrusion occasioned by a blood test is not significant," because for most people "the procedure involves virtually no risk, trauma, or pain."<sup>232</sup> In fact, the United

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226. Stephanie A. Parks, *Compelled DNA Testing in Rape Cases: Illustrating the Necessity of an Exception to the Self-Incrimination Clause*, 7 WM. & MARY. J. WOMEN & L. 499, 510 (2001).

227. *Id.*

228. *Id.*

229. Nat'l Comm. on the Future of DNA Evidence, National Institute of Justice, *What Every Law Enforcement Officer Should Know About DNA Evidence* (Sept. 1999), at <http://www.ncjrs.org/nij/DNAbro/what.html> (last visited Feb. 27, 2005) (noting that a DNA match proves with near certainty that a person was at a crime scene).

230. Nat'l Inst. of Justice, United States Dep't of Justice, NCJ 161258, *Convicted by Juries, Exonerated by Science: Case Studies in the Use of DNA Evidence to Establish Innocence After Trial* 15-17 (1996), at <http://www.ncjrs.org/pdffiles/dnaevid.pdf> (last visited Feb. 22, 2005).

231. Cf. *Schmerber v. California*, 384 U.S. 757, 769 (1966).

232. *Skinner v. Ry. Labor Exec. Ass'n* 489 U.S. 602, 625 (1989) (quoting *Schmerber*, 384 U.S. at 771); see also *Winston v. Lee*, 470 U.S. 753, 762 (1985) (indicating that "society's judgment that blood tests do not constitute an unduly extensive imposition on an individual's personal privacy and bodily integrity").

States Supreme Court in *Breithaupt v. Abram* noted that "the blood test procedure has become routine in our everyday life."<sup>233</sup>

Another factor that bears on the intrusiveness of DNA sampling is the information that the DNA profiles reveals. The DNA profile derived from the blood sample establishes only a record of the individual's identity.<sup>234</sup> Once an individual has been lawfully arrested and brought into state custody, the individual's identity becomes a matter of state interest, and he or she has lost any legitimate expectation of privacy in the identifying information derived from the sample.<sup>235</sup> The United States Court of Appeals for the Fourth Circuit explained in *Jones v. Murray* that an individual who is lawfully arrested upon probable cause has no privacy interest in his or her identifying information, even if derived from a blood sample.<sup>236</sup> In *Jones*, the court rejected a Fourth Amendment challenge to a Virginia statute requiring all convicted felons to submit blood samples for DNA analysis and inclusion in a databank for future law enforcement purposes.<sup>237</sup> In reaching that conclusion, the court determined that there is no "Fourth Amendment requirement of probable cause, or even a lesser degree of individualized suspicion, when government officials conduct a limited search [of one's DNA] for the purpose of ascertaining and recording the identity of a person" who is lawfully in the custody of the state.<sup>238</sup> The following excerpt illustrates the court's reasoning:

When a suspect is arrested upon probable cause, his identification becomes a matter of legitimate state interest and he can hardly claim privacy in it. We accept this proposition because the identification of suspects is relevant not only to solving the crime for which the suspect is arrested, but also for maintaining a permanent record to solve other past

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233. 352 U.S. 432, 436 (1957) (finding that where defendant was involved in a collision killing three people, a subsequent test of defendant's blood alcohol content while defendant lay unconscious in an emergency room was not an unreasonable search within the meaning of the Fourth Amendment).

234. *United States v. Kincade*, 379 F.3d 813, 837 (9th Cir. 2004) (indicating that the DNA profile derived from a defendant's blood sample establishes only a record of the defendant's identity and as a result, anyone "lawfully arrested and booked into state custody" can claim no right to privacy in the sample).

235. *Id.*

236. 962 F.2d 302 (4th Cir.1992), *cert. denied* 506 U.S. 977 (1992). "With the person's loss of liberty upon arrest comes the loss of at least some, if not all, rights to personal privacy otherwise protected by the Fourth Amendment." *Id.* at 306.

237. *Id.* at 307.

238. *Id.* Note that while the *Jones* court was addressing the issue as applied to convicted felons, the court emphasizes that this analysis applies to anyone who is lawfully brought into the custody of the state upon probable cause. *Id.* at 306; *see also* *Rise v. Oregon*, 59 F.3d 1556, 1558-59 (9th Cir. 1995) (finding that while obtaining DNA information requires drawing blood as opposed to "inking and rolling a person's fingertips," that difference does not render the intrusion on Fourth Amendment interests more than minimal).

and future crimes. This becomes readily apparent when we consider the universal approbation of "booking" procedures that are followed for every suspect arrested for a felony, whether or not the proof of a particular suspect's crime will involve the use of fingerprint identification. Thus a tax evader is fingerprinted just the same as is a burglar. While we do not accept even this small level of intrusion for free persons without Fourth Amendment constraint . . . the same protections do not hold true for those lawfully confined to the custody of the state.<sup>239</sup>

After balancing the minimal intrusion occasioned by the blood sampling against the government's interest in making a permanent record of the identities of its convicted felons, the *Jones* court held that DNA sampling was a reasonable search within the meaning of the Fourth Amendment.<sup>240</sup>

Applying similar reasoning, the court in *Smith v. State*<sup>241</sup> held that the comparison of a DNA profile with DNA evidence collected from crime scenes does not violate the Fourth Amendment because the individual from whom the profile is collected has no legitimate expectation of privacy in the profile once it is lawfully within the state's custody.<sup>242</sup> In *Smith*, the defendant's DNA profile had been obtained as a result of a state statute requiring convicted offenders to submit to compulsory blood testing.<sup>243</sup> When the defendant argued that his Fourth Amendment rights were violated when the state compared his DNA profile to the other profiles in the state DNA database, the court explained that "once DNA is used to create a profile, the profile becomes the property of the Crime Lab."<sup>244</sup> Expounding on this notion, the court emphasized that while the defendant might have a legitimate expectation of privacy in his or her blood at the time the sample is collected, once the sample becomes the property of the state crime lab, he or she no longer can claim a possessory or ownership interest in the DNA profile.<sup>245</sup> According to the *Smith* court, this is so because "society [does not] recognize an expectation of privacy in records made for public purposes from legitimately obtained samples."<sup>246</sup> Ultimately, the court in *Smith* concluded that the "reuse" of DNA profiles for purposes of comparison does not con-

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239. *Id.* at 306.

240. *Id.* at 306-07.

241. 744 N.E.2d 437 (Ind. 2001).

242. *Id.* at 439

243. *Id.* Note that the defendant also challenged inclusion of his profile in the state database because he was acquitted in the trial for which the sample was originally offered. *Id.* at 440-41. The Indiana Supreme Court, however, declined to adopt a rule excluding the use of the DNA profile "in the absence of a clear directive from the legislature on the need to exclude this evidence and in view of the very substantial law enforcement benefits from the database." *Id.* at 442.

244. *Id.* at 439.

245. *Id.*

246. *Id.*

stitute a search under the Indiana Constitution.<sup>247</sup> The court reached its holding by likening DNA profiles to traditional fingerprints: "As the Court of Appeals noted under the Indiana Constitution, this Court has 'recognized that law enforcement agencies are permitted to retain and reuse fingerprint records as well as other records of arrested parties.' We agree that this is equally true for DNA profiles."<sup>248</sup> Under the reasoning of *Smith*, it seems DNA profiles lawfully obtained in the course of an earlier investigation are freely available to the police in the course of new and unrelated investigations.<sup>249</sup>

It is important to remember that the *Jones* and *Smith* courts were construing statutes that mandated compulsory DNA sampling on individuals who had been convicted of a crime.<sup>250</sup> No court has addressed the constitutionality of DNA sampling of individuals merely arrested and charged with a crime. At least one court has intimated, however, that only individuals *actually convicted* of a crime lose their interest in their DNA profile.<sup>251</sup> *United States v. Kincade* held that the DNA Act of 2000 does not violate the Fourth Amendment in so far as it mandates compulsory DNA sampling on federal parolees.<sup>252</sup> The United States Court of Appeals for the Ninth Circuit's plurality opinion balanced the government's interest in CODIS against the convicted offenders' diminished expectations of privacy.<sup>253</sup> Judge Reinhardt's dissent recognized that the plurality's reasoning supports an inference that it would be constitutional to submit arrestees to compulsory DNA sampling because arrestees, like convicted offenders, have a reduced expectation of privacy.<sup>254</sup> Moreover, the dissent highlights

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247. *Smith*, 744 N.E.2d at 440.

248. *Id.* at 440–41 (citations omitted).

249. *Id.*; see also *Bickley v. State*, 489 S.E.2d 167, 170 (Ga. Ct. App. 1997) (holding that "DNA results are like fingerprints which are maintained on file by law enforcement authorities for use in further investigations"); *People v. King*, 232 A.D.2d 111, 117–118 (N.Y. App. Div. 1997) (holding that once a blood sample has been lawfully obtained, it is not necessary to show probable cause for each subsequent use of that sample because "once a person's blood has been obtained lawfully, he can no longer assert either privacy claims or unreasonable search and seizure arguments with respect to the use of that sample.").

250. *Id.*

251. *United States v. Kincade*, 379 F.3d 813, 839 (9th Cir. 2004).

252. *Id.*

253. *Id.* at 839 ("In light of conditional releasees' substantially diminished expectations of privacy, the minimal intrusion occasioned by blood sampling, and the overwhelming societal interests so clearly furthered by the collection of DNA information from convicted offenders, we must conclude that compulsory DNA profiling of qualified federal offenders is reasonable under the totality of the circumstances.").

254. *Id.* at 864 ("The Court has identified countless groups of individuals who have reduced expectations of privacy. . . . Arrestees' privacy expectations, too, appear to be significantly reduced. . . . Under the analysis engaged in by the plurality, a totality of the circumstances test would apply to any suspicionless search regime involving these groups.").

the fact that many other individuals experience a reduced expectation of privacy at some point in their life and as a result, under the plurality's reasoning, most Americans are susceptible to having their DNA sampled.<sup>255</sup> For example, Reinhardt's dissent notes that students, drivers, and airline passengers all maintain reduced expectations of privacy.<sup>256</sup> In response to the attack on its opinion, the plurality stressed the limited nature of its holding:

Judge Reinhardt's dissent repeatedly asserts that our decision renders every person in America subject to DNA sampling for CODIS purposes . . . . Nothing could be further from the truth—and we respectfully suggest that our dissenting colleague ought to recognize the obvious and significant distinction between the DNA profiling of law-abiding citizens who are passing through some transient status (*e.g.*, newborns, students, passengers in a car or on a plane) and lawfully adjudicated criminals whose proven conduct substantially heightens the government's interest in monitoring them and quite properly carries lasting consequences that simply do not attach from the simple fact of having been born, or going to public school, or riding in a car.<sup>257</sup>

Ultimately, the plurality's opinion in *Kincade* seems to suggest that compulsory DNA sampling may not be constitutionally imposed on arrestees.<sup>258</sup> The plurality clearly makes the distinction between a convicted offender's privacy interest that has been diminished versus a transient passenger in a car or airport whose privacy expectation is diminished.<sup>259</sup> Yet, the plurality never quite concludes that arrestees maintain a reduced privacy expectation distinguishable from a convicted offender.<sup>260</sup>

Ultimately, arrestees experience a significant reduction in privacy, and as a result, law enforcement may lawfully make a record of their identifying information.<sup>261</sup> Whether or not the identifying information may exist in the form of a DNA sample has yet to be addressed by the courts. Although *Kincade* suggests that arrestees' privacy interests are not reduced to the degree which would allow for compulsory DNA sampling, the court did not say as much in its holding.<sup>262</sup>

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255. *Id.* ("If reduced expectations of privacy render inapplicable the requirement of individualized suspicion, then suspicionless searches would be valid in many more situations than the plurality would presently be willing to admit.").

256. *Kincade*, 379 F.3d at 864.

257. *Id.* at 835–36.

258. *Id.*

259. *Id.*

260. *Id.*

261. *See Jones v. Murray*, 962 F.2d 302 (4th Cir.1992), *cert. denied* 506 U.S. 977 (1992).

262. *Kincade*, 379 F.3d at 836–37.



### III. ANALYSIS

Given the framework provided in the previous section, this note now applies traditional Fourth Amendment principles to Justice for All Act of 2004. The following section begins with an application of Fourth Amendment search law to the provisions of the recently amended DNA Act of 1994 and 2000 which authorize DNA sampling. Next, this section considers the rights implicated when the government subjects arrestees to DNA sampling pursuant to the Justice for All Act of 2004.

#### A. Federal Law Authorizes a Search

Applying the reasoning of *Schmerber*, it is clear that compulsory sampling of blood for DNA profiling pursuant to the DNA Act of 2000 is a search for Fourth Amendment purposes.<sup>263</sup> The very nature of the intrusion invades the body and infringes the bodily integrity that the Fourth Amendment is designed to protect.<sup>264</sup> As a result, the government's policy that arrestees changed with a crime submit to compulsory extraction of blood samples unquestionably calls for a search within the meaning of the Fourth Amendment. It is important to remember that while the current policy among many states and the federal government is to generate DNA profiles from blood samples, the text of the federal law does not require it.<sup>265</sup> Instead, the law merely permits blood sampling.<sup>266</sup> As a result, it cannot be said that federal law mandates a search, but only sanctions one.

If states decide to submit individuals arrested and charged with a crime to DNA sampling pursuant to the Justice for All Act of 2004, federal law allows them the flexibility to determine which DNA collection techniques to employ.<sup>267</sup> Given the vast array of DNA collection techniques available,<sup>268</sup> it is possible that not all states will model their procedures after the federal rule. Some states may choose to collect DNA in the form of saliva, skin cells, or even hair, and in fact, they do.<sup>269</sup> Applying the reasoning of *In re Grand Jury Proceedings (Mills)* and *United States v. Dionisio*, it is arguable that no search would result from the state collecting a skin or hair sample.<sup>270</sup> As a result, it would be completely in compliance with the Fourth

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263. See generally discussion *supra* Part II.B.1.

264. *Id.*

265. See generally discussion *supra* Part I.A.

266. *Id.*

267. See generally discussion *supra* Part I.A.3.

268. See Victor Walter Weedn and John W. Hicks, *supra* note 112.

269. Division of Governmental Studies and Services Washington State University and Smith Alling Lane, P.S., *supra* note 27, at 40.

270. For a discussion of *Mills* and *Dionisio* see *supra* Part I(B)(1)(b).

Amendment to obtain a DNA sample in the form of hair, expectorate, or epidermal cells from not just convicted offenders, but also from arrestees. A further consideration of the nature of the information derived from a DNA sample only supports this conclusion. The following section discusses the privacy interest one holds in the identifying features of his or her DNA profile.

Under *Katz*, the question of whether generating a DNA profile is a search hinges on whether society does or should recognize a reasonable expectation of privacy in the 13 STR loci used by the CODIS system. The Court has held that one does not maintain a reasonable expectation of privacy in one's identifying features,<sup>271</sup> and because the DNA profile used for CODIS contains only identifying features, it appears that an individual who has been arrested and charged with a crime does not have a reasonable expectation of privacy in his or her DNA profile. Note that under this analysis, it appears that no one, including free members of society, has a reasonable expectation of privacy in her or her STR profile.<sup>272</sup> Whether or not this analysis should extend to free citizens is beyond the scope of this note.

Furthermore, the security protocols the FBI has in place only emphasize that the government has no intention of using—and will not tolerate others using—the DNA sample as a means of revealing private medical information about the suspect.<sup>273</sup> Ultimately, under current Fourth Amendment principles, no privacy interests are implicated through the creation of a CODIS DNA profile.

It is important to remember, however, that most jurisdictions obtain a blood or buccal swab sample in order to generate that profile. As a result, the following section will assess the reasonableness of the searches that result from such intrusions.

## B. Federal Law Authorizes a Reasonable Search

There is no question that the benefits of collecting DNA from individuals arrested and charged with a crime aids in the prosecution of crimes, exoneration of the innocent, and possibly the deterrence of crimes.<sup>274</sup> While

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271. *United States v. Dionisio*, 410 U.S. 1 (1973).

272. For a discussion of the policy concerns and interests implicated when the government uses nonintrusive means to collect DNA samples for identification purposes see Edward J. Imwinkelried & D.H. Kaye, *DNA Typing: Emerging or Neglected Issues*, 76 WASH. L. REV. 413, 437–40 (2001).

273. See *infra* discussion on FBI quality assurance and control Part IV(B).

274. See, e.g., *Gaines v. State* 998 P.2d 166, 171–73 (Nev. 2000), *cert. denied* 531 U.S. 856 (2000) (emphasizing that courts have uniformly held that “the government interest outweighs a convict’s diminished right for privacy in his genetic markers because such information provides law enforcement with a dramatic new tool that can be used to accurately identify a criminal suspect attempting to conceal his identity.”).

there are legitimate privacy interests at stake in the intrusions occasioned by blood or buccal swab sampling, they are simply outweighed by the government's interest in CODIS. The law clearly establishes controls and safeguards to protect the genetic information contained in a DNA sample.<sup>275</sup> As a result, any threat to genetic privacy is minimal. On the scale that balances the government's interest in CODIS versus the arrestee's interest in his DNA profile, the government wins.

To reach this result, however, this analysis has employed the traditional Fourth Amendment test of reasonableness. This test balances the government's interest in solving and preventing crimes against the arrestee's privacy interest. Given an arrestee's diminished expectation of privacy, it is likely that the government will always win this balancing test, no matter the degree of intrusion. An arrestee's privacy interests simply cannot compete with interests in solving crime, preventing recidivism, exonerating the innocent, and convicting the guilty. The notion that the government's interest will nearly always tip the scales indicates that the traditional Fourth Amendment test of reasonableness is flawed. The following section argues for additional considerations that should bear on the reasonableness of submitting arrestees to DNA sampling pursuant to the Justice for All Act of 2004.

#### IV. PROPOSAL

The Fourth Amendment balancing test employed by courts like *Kincade* is flawed in that it fails to consider whether it is reasonable to use a CODIS hit as a law enforcement investigation tool. The FBI argues that the primary goal of the database is to generate hits that will lead law enforcement officers to an identifiable suspect.<sup>276</sup> In assessing the government's interest in such a program, courts have simply taken the FBI's argument at face value.<sup>277</sup> The Ninth Circuit Court of Appeals in *Kincade*, for example, did not consider what security measures and efficiency standards are in place to assure that the database produces accurate "hits." Moreover, the

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275. See *infra* discussion on FBI quality assurance and control Part IV(B).

276. See Fed. Bureau of Investigation, The FBI's Combined DNA Index System, *Mission Statement and Background*, *supra* note 6.

277. Numerous federal district and circuit courts, and a variety of state courts have addressed the Fourth Amendment concerns inherent in the compulsory DNA profiling of convicted offenders, but none have considered whether using a CODIS hit as a reliable source for criminal investigation is reasonable in light of Fourth Amendment protections. See, e.g., *Groceman v. United States Dep't of Justice*, 354 F.3d 411, 413-14 (5th Cir. 2004); *Velasquez v. Woods*, 329 F.3d 420, 421 (5th Cir. 2003); *Jones v. Murray*, 962 F.2d 302, 306-07 (4th Cir. 1992); *Nicholas v. Goord*, 2004 WL 1432533, \*2-\*6 (S.D.N.Y. Jun 24, 2004); *United States v. Stegman*, 295 F. Supp. 2d 542, 548-50 (D. Md. 2003); *Padgett v. Ferrero*, 294 F. Supp. 2d 1338, 1343-44 (N.D. Ga. 2003).

court failed to consider the potential for error, fraud, and mishandling of DNA samples that ultimately form the basis for a CODIS match. Whether the CODIS system operates under quality control standards that minimize the potential for needless prosecutions should bear on the Fourth Amendment test of reasonableness. After all, if the goal of the CODIS database is to serve as law enforcement's greatest investigation too, the FBI should make clear that its hits will not lead to unwarranted investigations of innocent persons. The following discussion offers additional considerations that should bear on the reasonableness of collecting DNA from arrestees pursuant to the Justice for All Act of 2004.

#### A. Fallibility of DNA Testing

Despite what is often portrayed in both the media and the courtroom, DNA testing is not infallible.<sup>278</sup> While it can be highly accurate when done correctly, the notion that DNA testing is error-free is wrong in both principle and practice.<sup>279</sup> There is always a possibility that a declared DNA match may be erroneous due to the sample quality, flaws in the testing process, or human error introduced during interpretation by an analyst.<sup>280</sup> The following sections offer instances in which human intervention can undermine the reliability of hits generated from the CODIS database.

##### 1. Collection and Storage of DNA sample

A number of problems can occur in the collection, handling, and storage of DNA samples, resulting in an increased rate of error.<sup>281</sup> DNA samples can be contaminated, either before or after collection, if they are not stored under proper conditions.<sup>282</sup> For example, if trace amounts of DNA

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278. See, e.g., Jill Lawless, THE ASSOC. PRESS, *DNA Fingerprinting Sparks Fresh Worries: Discoverer Says Genetic Databases Could be Misused* (Sept. 8, 2004) at <http://www.msnbc.msn.com/id/5944270/> (last visited Feb. 28, 2005) (founder of DNA fingerprinting reveals that "DNA testing is not an infallible proof of identity").

279. The Age, *DNA Testing and Human Error* (Dec. 11, 2003) at <http://www.theage.com.au/articles/2003/12/10/1070732280097.html> (last visited Feb. 28, 2005); see also Nat'l Research Council, Committee on DNA Forensic Science: An Update, *The Evaluation of Forensic DNA Evidence* 80 (1996), at <http://www.nap.edu/readingroom/books/DNA/> (last visited Feb. 28, 2005).

280. *Id.*

281. Jennifer Sue Deck, *Prelude to a Miss: A Cautionary Note Against Expanding DNA Databanks in the Face of Scientific Uncertainty*, 20 VT. L. REV. 1057, 1090 (Summer 1996).

282. Laurel Beeler & William R. Wiebe, *Comment: DNA Identification Tests and the Courts*, 63 WASH. L. REV. 903, 919-21 (1998). A DNA sample can be contaminated by a variety of products, from carpet cleaner at a crime scene to the lab technician's perspiration at the commercial lab. William C. Thompson & Simon Ford, *DNA Typing: Acceptance and Weight of the New Genetic Identification Tests*, 75 VA. L. REV. 45, 66-67 (1989); see also

from an outside source come into contact with another DNA sample, the ensuing analysis can be complicated or even inaccurate.<sup>283</sup> As a result, error rates are high in situations where DNA profiles are created from samples that are mixed or partially degraded.<sup>284</sup>

Errors can also occur in the collection and handling of a DNA sample.<sup>285</sup> DNA samples can be damaged from the police directly or indirectly destroying DNA evidence or altering the evidence such that it can no longer be accurately examined.<sup>286</sup> In addition, the laboratory that examines the DNA profile might mischaracterize the DNA sample or the crime scene evidence sample.<sup>287</sup> Several instances exist in which laboratory personnel actually switched or mislabeled DNA samples, which resulted in needless persecution of innocent individuals.<sup>288</sup> Even a small potential for error can be significant in cases where there is little or no other evidence against a suspect, as in cases relying on CODIS hits.

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J.I. Thornton, *DNA Profiling: New Tool Links Evidence to Suspects With High Certainty*, CHEMICAL & ENGINEERING NEWS, Nov. 20, 1989, at 30 (stating that DNA is very fragile and is easily contaminated).

283. *Id.* at 920.

284. *Id.*

285. See generally Ryan MacDonald, *Juries and Crime Labs: Correcting the Weak Links in the DNA Chain*, 24 AM. J. L. & MED. 345, 357-59 (1998) (emphasizing the need for law enforcement to observe "chain of custody" standards to preserve the integrity of a DNA sample.)

286. Cronan, *supra* note 200, at 139; see also William C. Thompson, *DNA Evidence in the O.J. Simpson Trial*, 67 U. COLO. L. REV. 827 (1996) (detailing the laundry list of errors that occurred in the handling of biological evidence obtained from Mr. Simpson and the crime scene).

287. The following excerpt illustrates the potential for a mismatch during the handling process: "Suppose that in creating the databank, Jones's DNA was switched with Smith's, and Jones is the true source of the evidence sample. The database search then will falsely incriminate Smith." D.H. Kaye, *Genetics in the Courtroom: Bioethical Objections to DNA Databases for Law Enforcement: Questions and Answers*, 31 SETON HALL L. REV. 936, 940 (2001).

288. See, e.g., Roma Khanna & Steve McVicker, *New DNA Test Casts Doubt on Man's 1999 Rape Conviction*, HOUSTON CHRON., Mar. 10, 2003, at <http://www.truthinjustice.org/sutton.htm> (last visited Feb. 28, 2005); Innocence Project, Timothy Durham, at [http://www.innocenceproject.org/case/display\\_profile.php?id=43](http://www.innocenceproject.org/case/display_profile.php?id=43) (last visited Nov. 2, 2004). In 1993 Timothy Durham was convicted of multiple charges including first-degree rape, forcible sodomy, and attempted robbery. *Id.* Despite the testimony of eleven witnesses who placed Durham at a skeet shooting competition in Dallas at the time of the rape, the prosecution was successful in convincing the jury of Durham's guilt using DNA evidence that matched semen recovered from the victim. *Id.* Four years later, it was discovered that DNA samples had been mixed together in the lab. *Id.* Subsequent DNA testing proved Durham's innocence. *Id.*

## 2. *Interpretation of Results*

The potential for error in DNA testing can be increased by the context in which lab technicians perform their analysis.<sup>289</sup> Laboratory reviews indicate that some DNA analysts do not exactly blind themselves to the prosecution's expected or desired outcome.<sup>290</sup> Evidence shows that when lab analysts work closely with law enforcement, some lab analysts demonstrate tendencies to falsify evidence or misrepresent results.<sup>291</sup> Failure to correctly report results of DNA analyses and reporting misleading or inaccurate statistical information has resulted in the conviction of innocent people.<sup>292</sup>

Several cases exist in which lab analysts have greatly exaggerated the statistical significance of their findings or reported matches when none was found.<sup>293</sup> In 2003 Houston's crime lab was shut down after an independent investigation revealed widespread problems associated with the handling and analysis of DNA evidence.<sup>294</sup> As a result of the shut down, thousands of cases are scheduled for review and 375 for re-testing.<sup>295</sup> While the problems uncovered in these labs are thought to be the exception rather than the rule, these cases emphasize the fallibility and limitations inherent in DNA testing and the need for careful scrutiny, particularly in cases that hinge on DNA evidence alone.<sup>296</sup>

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289. MacDonald, *supra* note 286 at 355–59.

290. See, e.g., Timothy W. Maier, *Inside the DNA Labs*, Insight on the News (May 26, 2003), at <http://www.insightmag.com/news/2003/06/10/National/Inside.The.Dna.Labs-436794.shtml> (last visited Feb. 28, 2005) (offering the story of former FBI lab technician Jacquelyn Blake who admitted she failed to follow required scientific procedures while analyzing 103 DNA samples during the last few years).

291. For example, Anthony Bragdon spent ten years in prison for a rape he did not commit because FBI Crime Lab analyst Michael Malone gave inaccurate testimony and withheld evidence. John Soloman, *Conviction Tossed on FBI Lab Misconduct*, A.P. News, at <http://www.truthinjustice.org/FBI-lab-misconduct.htm> (last visited Feb. 28, 2005).

292. See generally Innocence Project, at [innocenceproject.org](http://innocenceproject.org).

293. See, e.g., *Hot Topic: HPD Crime Lab*, HOUSTON CHRON., (Nov. 8, 2004), at <http://www.chron.com/content/chronicle/special/03/crimelab/> (Feb. 28, 2005) (offering an archive of all the reports of fraudulent activity that has been reported about the Harris County crime lab); Steve Mills and Maurice Possley, *Report Alleges Crime Lab Fraud: Scientist is Accused of Providing False Testimony*, CHICAGO TRIB. (Jan. 14, 2001) at [http://www.law-forensic.com/cfr\\_fish\\_5.htm](http://www.law-forensic.com/cfr_fish_5.htm) (last visited Feb. 28, 2005).

294. *HPD Crime Lab*, *supra* note 294.

295. Steve McVicker, *More DPS Labs Flawed: DNA Testing Woes Across State Threaten Thousands of Cases*, Houston Chron., (Mar. 27, 2004), at <http://www.truthinjustice.org/labs-flawed.htm> (last visited Feb. 28, 2005).

296. See generally Frederic Whitehurst, *Forensic Crime Labs: Scrutinizing Results, Audits & Accreditation—Part 1*, 28 *Champion* 6, 6 (Apr. 2004) (discussing the devastating effects of “forensic failures”).

### 3. *Duplicate DNA Matches*

Another potential threat to persecution of innocent individuals is that current DNA testing methods allow for the possibility, however slight, that two people can have matching genetic fingerprints.<sup>297</sup> As the CODIS database expands, this possibility becomes more and more likely due to the statistical probabilities for a match.<sup>298</sup>

### 4. *Manipulation of DNA Evidence*

Courts assessing the reasonableness of using CODIS as a tool for criminal investigation must at least recognize the "craftiness and adaptability of the criminal mind, which already is trying to outsmart forensic DNA technologies."<sup>299</sup> Given the increase in public awareness about the advances in DNA technology, criminals are educating themselves on the various ways DNA evidence may be used and abused.<sup>300</sup> Clever criminals have managed to manipulate DNA evidence to mask their identity.<sup>301</sup> Reports indicate that criminals are taking unusual steps to ensure that they leave no biological evidence at the scene of a crime—or that they leave someone else's.<sup>302</sup> For example, law enforcement authorities in Waco, Texas reported that a suspected rapist was caught "decked out in mask and gloves and carrying a condom."<sup>303</sup> Only 100 miles down the road, Austin authorities apprehended a suspected burglar who, at the time of arrest, was "wearing protective shoe covers and two pairs of gloves—just like a lab technician."<sup>304</sup> One of the most impressive—or disturbing—demonstrations of criminal cunning occurred when an inmate, in an attempt to undermine the DNA evidence used

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297. Lawless, *supra* note 280 (recounting the statement from Alex Jeffereys, founder of the genetic fingerprint, that the probability of two individuals having matching genetic sequences is "between one in a billion or one in a trillion").

298. *Id.* In his interview, Mr. Jeffereys comments that the probability that two individuals would share the same DNA sequence "sounds very good indeed until you start thinking about large DNA databases." *Id.* According to Mr. Jeffereys, "In a database of 2.5 million people, a one-in-a-billion probability becomes a one-in-400 chance of at least one match." *Id.*

299. Rosen, *supra* note 15.

300. Richard Willing, Criminals Try to Outwit DNA, *USA Today*, Aug. 28, 2000, at A1. In his article, Willing reports that detention officers in Utah "have overheard prisoners coaching each other on how to spread blood and semen samples from other people around crime scenes to try to fool DNA analysts."

301. Rosen, *supra* note 15. In her article, Rosen reports that "law enforcement officers in Richmond have found prisoners taking DNA tests for other prisoners."

302. Willing, *supra* note 301.

303. *Id.* Willing also reports that "rape victims in California, Michigan and New York have reported incidents in which their assailants forced them to clean and bathe to try to scrub away any DNA evidence." *Id.*

304. *Id.*

in his rape conviction, had a relative smuggle his semen sample out of the jail in a ketchup packet, and then paid a woman fifty dollars to use the sperm to stage a phony rape.”<sup>305</sup> Apparently, the clever crook manipulated the DNA evidence to convince law enforcement that the real rapist was still at large.<sup>306</sup>

## B. Quality Assurance Standards

Given the potential for error, fraud, and corruption, whether it is reasonable to employ the CODIS database to generate investigative leads depends on whether the FBI has sufficient quality assurance standards in place to protect the integrity of the DNA samples it collects and profiles.

To guard against the possibility of unreasonable error in the CODIS database, the FBI established standards that all participating state crime labs must follow to “ensure the quality and integrity of the data and competency of the laboratory.”<sup>307</sup> Furthermore, an FBI advisory board exists to ensure and, if appropriate, periodically revise the recommended standards for quality assurance.<sup>308</sup> It is important to remember that the DNA Act of 1994 provides that access to the CODIS database is subject to cancellation if the FBI’s quality control requirements are not met by participating forensic laboratories.<sup>309</sup>

To protect the integrity of the DNA analysis process, the FBI’s quality assurance standards specifically address contamination.<sup>310</sup> The standards require that a state forensic laboratory participating in the CODIS “shall have a facility that is designed to provide adequate security and minimize contamination.”<sup>311</sup> To protect the quality of the DNA sample, the FBI re-

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<sup>305</sup>. *Id.*

<sup>306</sup>. *Id.*

<sup>307</sup>. Fed. Bureau of Investigation, Quality Assurance Standards for Convicted Offender DNA Databasing Laboratories, at <http://www.fbi.gov/congress/congress02/datastd.htm> (last visited Feb. 28, 2005). The quality assurance standards for forensic DNA testing laboratories address the following topics: organization and management, personnel, facilities, evidence control, validation, analytical procedures, equipment calibration and maintenance, reports, review, proficiency testing, corrective action, audits, safety, and use of subcontractor laboratories. *Id.*

<sup>308</sup>. 42 U.S.C. § 14131(a) (1994).

<sup>309</sup>. 42 U.S.C. § 14132(c) (2004).

<sup>310</sup>. Fed. Bureau of Investigation, Testimony of Dwight E. Adams, Deputy Assistant Director, Laboratory Division, FBI Before the House Committee on Government Reform Subcommittee on Government Efficiency, Financial Management and Intergovernmental Relations, The FBI’s DNA Program, (June 12, 2001) at <http://www.fbi.gov/congress/congress01/dwight061201.htm> (citing Quality Assurance Standards for Forensic DNA Testing Laboratories, Standard 6.1).

<sup>311</sup>. *Id.* (citing Quality Assurance Standards for Forensic DNA Testing Laboratories, Standard 6.1.4).



quires the laboratories to "have a procedure requiring that evidence sample/extract(s) are stored in a manner that minimizes degradation."<sup>312</sup> To prevent DNA samples from loss or misidentification, the FBI guidelines require forensic laboratories to keep specific documentation with respect to the identification of the sample and chain of custody.<sup>313</sup> Finally, to keep the DNA analysts on their toes, the FBI provides for external proficiency tests to be performed at regular intervals.<sup>314</sup> "Compliance with both the quality assurance standards and the external proficiency testing program are monitored by annual[,]" external audits every year.<sup>315</sup>

Not only does the FBI monitor the collection and analysis of DNA samples, but also individual states take an active role in monitoring the system of DNA collection.<sup>316</sup> The majority of states have quality assurance standards of their own in place to regulate the handling and use of DNA profiles to be used for the CODIS.<sup>317</sup>

If doubts remain about the accuracy of DNA matches created using the CODIS, it is important to remember that evidence of DNA match may always be challenged as inadmissible at trial based on the mishandling, chain of custody, or quality of the procedures employed to perform the testing.<sup>318</sup> In the alternative, a suspect whose DNA has been matched to DNA collected from a crime scene can merely provide a new DNA sample if he believes

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312. *Id.* (citing Quality Assurance Standards for Forensic DNA Testing Laboratories, Standard 7.2.1.).

313. A complete list of the Quality Assurance Standards for Forensic DNA Testing Laboratories is at <http://www.cstl.nist.gov/div831/strbase/dabqas.htm> (last visited Feb. 25, 2005). Standard 7, Evidence Control, provides for the following:

7.1 The laboratory shall have and follow a documented sample inventory control system. This system shall ensure that:

7.1.1 Offender samples are marked for identification.

7.1.2 Documentation of sample identity, collection, receipt, storage, and disposition is maintained.

7.1.3 The laboratory follows documented procedures that minimize sample loss, contamination, and/or deleterious change.

7.1.4 The laboratory has secure areas for sample storage including environmental control consistent with the form or nature of the sample.

314. 42 U.S.C. § 14132(b)(2) (2004).

315. *Id.* at §14132(b)(2)(B) (2004).

316. See S. Axelrad, State Regulations on Quality Assurance for Forensic DNA Laboratories, 2004 Am. Soc'y Law, Medicine & Ethics, at [http://www.aslme.org/dna\\_04/reports/axelrad2.pdf](http://www.aslme.org/dna_04/reports/axelrad2.pdf) (last visited Nov. 13, 2004).

317. The American Society of Law, Medicine, and Ethics produced a report that surveys every state's DNA database statutes, including the statutes that address issues of misuse, mishandling, and retention of DNA samples. DNA Fingerprinting and Civil Liberties—Project Homepage, (Sept. 2004), Am. Soc'y of Law, Medicine & Ethics, at [http://www.aslme.org/dna\\_04/grid/statute\\_grid.html](http://www.aslme.org/dna_04/grid/statute_grid.html) (last visited Nov. 13, 2004).

318. See, e.g., *Fugate v. Com.*, 993 S.W.2d 931 (Ky. 1999).

that the match is erroneous.<sup>319</sup> In his article, *Genetics in the Courtroom*, Professor D.H. Kaye discusses a solution in the event a CODIS match arises because either the databank sample or the trace evidence sample has been mischaracterized:

Suppose that in creating the databank, Jones's DNA was switched with Smith's, and Jones is the true source of the evidence sample. The database search then will falsely incriminate Smith. But the database search should be the beginning, not the end of the investigation. Even in the unlikely event that the police have no other evidence against Smith, a confirmatory DNA test of a new sample taken from Smith will exclude him as a possible source of the evidence sample.<sup>320</sup>

One should note, however, that because the current practice among law enforcement communities around the country is to corroborate a positive DNA match with other evidence before proceeding with prosecution, it might very well be unnecessary to challenge the DNA match.<sup>321</sup>

## V. CONCLUSION

This note attempts to bring to the forefront additional considerations that should bear on the Fourth Amendment test of reasonableness when the government submits arrestees to DNA sampling pursuant to the Justice for All Act of 2004. This note concludes that whether it is a reasonable search to collect DNA from individuals arrested and charged with a crime should depend, in no small part, on whether it is reasonable to employ CODIS as an investigative tool. The traditional Fourth Amendment test of reasonableness as applied to the DNA Acts of 1994 and 2000 balances the arrestee's privacy interest against the government's interest in crime fighting. Whether the government's interest can actually be accomplished through a comprehensive DNA database, however, has yet to be considered as an additional factor bearing on the reasonableness of conducting a search of one's DNA. This note proposes that because the DNA samples are collected for the purpose of uploading into the CODIS database, one should question whether or not it is reasonable to use CODIS as a law enforcement tool.

Given the potential for error, fraud, and corruption in DNA analysis, is it reasonable for the government to rely on CODIS hits as an aid to criminal investigations? Absolutely. CODIS does not purport to be perfect, but then again, neither does the criminal justice system. The very standard of guilt in a criminal prosecution is "beyond a reasonable doubt." The potential for

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319. Kaye, *supra* note 288.

320. *Id.*

321. Elissa Gaynor, A Modern Day Crime-Fighting Tool: DNA Testing, Knowledge Gene J., at <http://www.knowledgene.com> (last visited Feb. 24, 2005).

error and fraud inherent in the CODIS, like any other system, is acceptable so long as that potential is not unreasonable. A criminal justice system that employs DNA as a forensic tool is most certainly justified in using "hits" from CODIS in a criminal investigation, notwithstanding the potential for error and fraud, because stringent uniform quality control procedures and regulations exist to prevent wrongful convictions.

The CODIS database has the potential to drastically change the way law enforcement investigates crime. It has proven to be an effective crime-solver, and with time, there is no doubt that it will become an effective crime-fighter. Its success, however, is only as large as its database, and the future of CODIS hinges on the government's ability to constitutionally exact DNA from certain individuals. The constitutionality of expanding the scope of the CODIS database to include DNA from arrestees will remain unsolved in the absence of a definitive ruling by the Supreme Court.<sup>322</sup> It is quite possible, however, that after considering all of the interests at stake, the Justice for All Act of 2004 will be upheld.

Simply because a law is constitutional, however, does not necessarily mean that it reflects sound public policy. Apart from whether the acquisition of DNA is constitutional, one cannot deny the threat to individual privacy imposed by a government-controlled database of genetic information. Individuals submitting DNA samples must have guarantees of privacy protection, such as how the information will be used, who will have access to it, how it will be disseminated, and if and when it will be expunged from the database. Although current federal law addresses all of these issues, the courts will have to continue to modify the Fourth Amendment balancing test as new developments in DNA technology emerge.

Kimberly A. Polanco\*

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322. Note that because the Ninth Circuit Court of Appeal's decision in *United States v. Kincade*, 379 F.3d 813, 840 (9th Cir. 2004), has been appealed to the United States Supreme Court, it is possible that a definitive ruling on the constitutionality of DNA sampling will be made in the near future. See <http://www.supremecourtus.gov/docket/04-7253.htm> (last visited Feb. 25, 2005) (indicating that the Ninth Circuit's decision has been issued a Supreme Court docket number and briefs from the petitioner and respondent have been filed).

\* J.D. expected May 2005; B.A., Rhodes College, 2001. The author will be attending Arizona State College of Law in August 2005, where she will pursue an LL.M. in Biotechnology and Genomics. The author thanks Erin Vinett, Joseph Falasco, Lindsey Gustafson, and Daniel and Sara Driggers for their suggestions, support, and encouragement throughout this writing process. Finally, the author dedicates this note to the memory of her grandfather, Bill Davis, for his lasting faith and love.