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# Comments: Maryland's DNA Data Base System and Repository — Does It Pass Constitutional Muster?

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# MARYLAND'S DNA DATA BASE SYSTEM AND REPOSITORY: DOES IT PASS CONSTITUTIONAL MUSTER?

## I. INTRODUCTION

Legal and law enforcement communities are experiencing an explosion of interest in the advancing field of DNA<sup>1</sup> technology. This interest stems from a scientific procedure, commonly known as DNA fingerprinting,<sup>2</sup> which utilizes DNA to identify persons through the creation of an individual-specific DNA fingerprint.<sup>3</sup> DNA fingerprinting is based upon the fact that, with the exception for identical twins, each individual has an entirely unique genetic code which is stored in the DNA of that particular individual.<sup>4</sup> Additionally, because DNA fingerprinting is sensitive and accurate, it has gained wide acceptance in both the legal and the law enforcement communities.<sup>5</sup> As a result, twenty-five states,<sup>6</sup> including Maryland, have

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1. DNA stands for deoxyribonucleic acid. See BRUCE ALBERTS ET AL., *MOLECULAR BIOLOGY OF THE CELL* 4 (2d ed. 1989).

2. There are three types of DNA analysis based on different principles. Kamrin T. MacKnight, Comment, *The Polymerase Chain Reaction (PCR): The Second Generation of DNA Analysis Methods Takes the Stand*, 9 SANTA CLARA COMPUTER & HIGH TECH. L.J. 287, 293 (1993). Scientifically, DNA fingerprinting only refers to one of these types of analysis known as Restriction Fragment Length Polymorphism (RFLP). *Id.* at 294 n.29. However, people unfamiliar with molecular biology often group all DNA testing methods under the term "DNA Fingerprinting." *Id.*

In this Comment, DNA fingerprinting will only be used to refer to the RFLP technique.

3. A DNA fingerprint is also termed a DNA profile or a DNA blueprint. E. Donald Shapiro & Michelle L. Weinberg, *DNA Data Banking: The Dangerous Erosion of Privacy*, 38 CLEV. ST. L. REV. 455, 455 (1990).

4. *Id.*

5. See, e.g., *Cobey v. State*, 80 Md. App. 31, 35-36 & n.7, 559 A.2d 391, 392-93 & n.7 (1989) (claiming that DNA fingerprinting can "identify a suspect with 'virtual certainty'"); *Andrews v. State*, 533 So. 2d 841 (Fla. Dist. Ct. App. 1988) (accepting DNA fingerprinting); *People v. Wesley*, 533 N.Y.S.2d 643 (Albany County Ct. 1988) (same).

6. As of October 1, 1994, the following states have enacted DNA data banking statutes: Alabama (ALA. CODE §§ 36-18-20 to -39 (Supp. 1994)); Arizona (ARIZ. REV. STAT. ANN. § 31-281 (Supp. 1994)); California (CAL. PENAL CODE § 290.2 (West 1988 & Supp. 1995)); Colorado (COLO. REV. STAT. ANN. § 17-2-201(5)(g)(I) (West Supp. 1989)); Florida (FLA. STAT. ANN. § 943.325 (West Supp. 1995)); Georgia (GA. CODE ANN. § 24-4-60 (1995)); Hawaii (HAW. REV. STAT. § 706-603 (Supp. 1992)); Illinois (ILL. ANN. STAT. ch. 730, para. 5/5-4-

enacted legislation allowing for the establishment of repositories for the storage of DNA samples<sup>7</sup> obtained from convicted persons<sup>8</sup> and for the storage of the fingerprints or profiles derived from the DNA analysis.<sup>9</sup> The purpose of these DNA data banks is twofold: to further criminal law enforcement by providing an accurate identification method in criminal investigations and to deter recidivist acts.<sup>10</sup>

In addition to state action, the Federal Bureau of Investigation (FBI) is building a massive national DNA data bank system<sup>11</sup> called "CODIS" in order to facilitate the transfer of information between data banks.<sup>12</sup> Once this system is operational, "CODIS will involve a centralized index that references the sources of all DNA profiles, with supporting records maintained at the state level."<sup>13</sup> Congress

3 (Smith-Hurd 1992 & Supp. 1995)); Indiana (IND. CODE ANN. §§ 20-12-34.5-1 to .5-6 (Michie 1991)); Iowa (IOWA CODE ANN. §§ 13.10, 901.2, 906.4 (West 1995)); Kansas (KAN. STAT. ANN. § 21-2511 (Cumm. Supp. 1994)); Kentucky (KY. REV. STAT. ANN. §§ 17.170, 17.175 (Baldwin 1995)); Louisiana (LA. REV. STAT. ANN. §§ 15:535, 15:536, 15:578 (West 1992 & Supp. 1995)); Maryland (MD. ANN. CODE art. 88B, § 12A (1994)); Michigan (MICH. COMP. LAWS ANN. §§ 28.171 to .176 (West Supp. 1995)); Minnesota (MINN. STAT. ANN. § 609.3461 (West 1991 & Supp. 1994)); Missouri (MO. ANN. STAT. §§ 650.050 to .057 (Vernon Supp. 1995)); Nevada (NEV. REV. STAT. ANN. §§ 176.111, 179A.075 (Michie Repl. Vol. 1992)); North Carolina (N.C. GEN. STAT. §§ 15A-266 to -266.12 (Supp. 1994)); Oklahoma (OKLA. STAT. ANN. tit. 57, § 584 (West 1991 & Supp. 1995)); Oregon (OR. REV. STAT. § 181.085 (1993)); South Dakota (S.D. CODIFIED LAWS ANN. § 23-5-14 (Supp. 1995)); Tennessee (TENN. CODE ANN. §§ 38-6-113, 40-35-321 (Supp. 1995)); Virginia (VA. CODE ANN. § 19.2-310.5 (Michie Repl. Vol. 1995)); Washington (WASH. REV. CODE ANN. § 43.43.752 (West Supp. 1995)); and West Virginia (W. VA. CODE § 15-2-24a (Repl. Vol. 1995)).

For a comprehensive identification of enacted and pending DNA data bank legislation as of December 31, 1993, see Jean E. McEwen & Philip R. Reilly, *A Review of State Legislation on DNA Forensic Data Banking*, 54 AM. J. HUM. GENETICS, 941 (1994).

7. The storage facilities for the DNA samples are often called DNA banks or DNA repositories. See McEwen & Reilly, *supra* note 6, at 941.
8. The "convicted persons" from whom the DNA sample is to be obtained is defined differently according to the various state statutes. See *id.* at 944.
9. The storage facilities for the profiles are often called DNA data banks or DNA database systems. See *id.* at 941.
10. See *id.*
11. See *id.* at 941; Manning A. Connors, III, Comment, *DNA Databases: The Case for the Combined DNA Index System*, 29 WAKE FOREST L. REV. 857, 857 & n.5 (1994); see also Jeffrey L. Fox, *FBI Embracing Genetic Fingerprints*, 7 BIOTECHNOLOGY 551 (1989) ("The bureau is building a data base. . ."); Shapiro & Weinberg, *supra* note 3, at 486 n.97 ("[T]he FBI . . . is already developing a computerized database.').
12. "CODIS" stands for Combined DNA Identification System. McEwen & Reilly, *supra* note 6, at 941; Connors, *supra* note 11, at 857.
13. McEwen & Reilly, *supra* note 6, at 941; see also Connors, *supra* note 11, at 857.

has even proposed legislation which will make the DNA banks of individual states eligible for federal grants if they follow certain guidelines with respect to quality assurance and proficient testing standards.<sup>14</sup>

This Comment analyzes a variety of constitutional implications pertaining to Maryland's DNA data banking statute. Section II of this Comment explains the science behind DNA technology and the procedures used to perform DNA fingerprinting. Section III discusses some constitutional implications of DNA data banking statutes. Section IV analyzes the constitutionality of Maryland's DNA data base system and repository statute. Finally, this Comment proffers the conclusion that Maryland's DNA data base system and repository statute would withstand constitutional challenges.

## II. DNA TECHNOLOGY

In general, DNA technology is at the "cutting edge" of science. Particularly, "DNA fingerprinting is at the 'cutting edge' of forensic science[.]"<sup>15</sup> DNA fingerprinting is a process that has arisen from the scientific fields of molecular and cell biology and genetics. In order to understand DNA fingerprinting, it is helpful to have a knowledge of some of the basic principles of these two scientific fields. The first part of this section will address these principles, and the second part of this section will explain the testing procedures.

### A. *The Scientific Principles Relied Upon for DNA Fingerprinting*

The cell is the fundamental unit of living organisms.<sup>16</sup> Most cells contain two basic components—the nucleus and the cytoplasm.<sup>17</sup> The nucleus of the cell contains the DNA,<sup>18</sup> which is the prime genetic molecule.<sup>19</sup> "While DNA is the basic material of heredity, a gene is

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14. H.R. 829, 103d Cong., 1st Sess. (1993); S. 497, 103d Congress, 1st Sess. (1993) (the DNA Identification Act of 1993); see McEwen & Reilly, *supra* note 6, at 942 (discussing the DNA Identification Act of 1993); Connors, *supra* note 11, at 857 (discussing the DNA Identification Act of 1993).

15. *People v. Wesley*, 533 N.Y.S.2d 643, 644 (Albany County Ct. 1988).

16. *Id.* at 645.

17. There are two classes of cells: prokaryotic cells (the cells of bacteria and blue green algae) and eukaryotic cells (the cells of plant, animals, protists, and fungi). LELAND G. JOHNSON, *BIOLOGY 78* (John Stout et al. eds., 1983). The major difference between the two is that prokaryotic cells lack a distinct, membrane-bound nucleus and eukaryotic cells possess a membrane-bound nucleus. *Id.*

18. ALBERTS ET AL., *supra* note 1, at 17.

19. *Id.* at 95.

considered 'the basic structural and functional unit of heredity.'"<sup>20</sup>

DNA consists of two complementary polynucleotide<sup>21</sup> strands in the form of a double helix.<sup>22</sup> "The traditional analogy [of the DNA double-helix model] is [that of] a [twisted] ladder."<sup>23</sup> Each nucleotide in a strand is composed of a nitrogenous base and a sugar<sup>24</sup> which is linked by a phosphate group to the sugar of the adjacent nucleotide.<sup>25</sup> One of the four nitrogenous bases, adenine (A), cytosine (C), guanine (G) or thymine (T), is attached on the inside of the sugar-phosphate chain.<sup>26</sup> The two strands are then joined together by hydrogen bonds between pairs of the bases—A is always paired with T and G is always paired with C.<sup>27</sup> Thus, with respect to the twisted ladder analogy, the bases and their hydrogen bonds are the rungs of the ladder and the sugar-phosphate chains are the sides of the ladder.<sup>28</sup> The order of the bases is very unique and thus, the "precise sequence of bases carries the genetic information."<sup>29</sup>

A set of three adjacent bases on one strand of the DNA molecule is called a codon<sup>30</sup> which specifies one amino acid.<sup>31</sup> "Amino acids are called the 'building blocks' of [protein molecules] because proteins are linear polymers of amino acids."<sup>32</sup> A gene is a hereditary unit, composed of a group of codons located at a particular site on a chromosome.<sup>33</sup> A chromosome is a long, thread-like body enveloped by the nucleus of the cell.<sup>34</sup> "The genes of greatest interest in genetic analysis are those for which there are many variations and are thus

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20. JoAnn M. Longobardi, Note, *DNA Fingerprinting and the Need for a National Data Base*, 17 *FORDHAM URB. L.J.* 323, 326 (1989) (quoting J. BAKER & G. ALLEN, *THE STUDY OF BIOLOGY* 442 (4th ed. 1982)).

21. "Polynucleotide" means many nucleotides. See JOHNSON, *supra* note 17, at G-16. A nucleotide is "[a]n organic compound consisting of a nitrogen-containing base . . . , a five-carbon sugar, and phosphoric acid." See *id.* at G-13.

22. JAMES D. WATSON ET AL., *MOLECULAR BIOLOGY OF THE GENE* 240-41 (4th ed. 1987). In 1953 James Watson and Francis Crick discovered the double helical structure of DNA. *Id.* at iii. They were awarded the Nobel Prize in 1962 for their discovery. *Id.*

23. Longobardi, *supra* note 20, at 326.

24. The sugar is deoxyribose. LUBERT STRYER, *BIOCHEMISTRY* 72 (3d ed. 1988).

25. WATSON ET AL., *supra* note 22, at 241. The sugar-phosphate backbone is structural and very regular. *Id.*

26. *Id.*

27. *Id.*

28. Longobardi, *supra* note 20, at 326.

29. STRYER, *supra* note 24, at 76.

30. WATSON ET AL., *supra* note 22, at 223-24.

31. ALBERTS ET AL., *supra* note 1, at 102.

32. JOHNSON, *supra* note 17, at G-2. An amino acid is "[a]n organic compound with an amino group (NH<sub>3</sub>) and a carboxyl group (COOH) bonded to the same carbon atom." *Id.* at G-2.

33. *Id.* at G-9.

34. *Id.* at 567.

termed 'polymorphic.'"<sup>35</sup> These polymorphic genes allow individuals to be identified through DNA testing.<sup>36</sup>

### B. Protocol for DNA Fingerprinting

There are three types of DNA testing methods used for individual identification.<sup>37</sup> Neither Maryland's DNA data banking statute<sup>38</sup> nor CODIS<sup>39</sup> prescribe a specific type of DNA testing method which should be used for the DNA analysis. However, Restriction Fragment Length Polymorphism (RFLP),<sup>40</sup> referred to as DNA fingerprinting, is the DNA testing technique commonly accepted by the Maryland courts.<sup>41</sup>

RFLP involves the following steps:<sup>42</sup>

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35. MacKnight, *supra* note 2, at 292. "'Polymorphism' refers to different forms of the same basic structure. There are many examples of polymorphism in human genetics, such as ABO blood types and eye color." *Id.* at 292 n.21.

36. James P. O'Brien, Jr., Comment, *DNA Fingerprinting: The Virginia Approach*, 35 WM. & MARY L. REV. 767, 770 (1994).

37. MacKnight, *supra* note 2 (discussing the technology and procedures of (1) direct gene sequencing or "mapping," (2) Polymerase Chain Reaction (PCR), and (3) Restriction Fragment Length Polymorphism (RFLP)).

Direct gene sequencing "determine[s] the exact nucleotide sequence present in the DNA molecule of interest[.]" and therefore, direct gene sequencing "can determine identity with 100% accuracy." *Id.* at 293. The nucleotide sequence is determined by making a cDNA clone from the mRNA. ALBERTS ET AL., *supra* note 1, at 186.

PCR was developed by a California company named Cetus Corporation. Shapiro & Weinberg, *supra* note 3, 486 at n.43; Longobardi, *supra* note 20, at 357 n.35. "The PCR amplification system simply takes advantage of the natural DNA replication system and manipulates it to the advantage of the analyst to produce many millions of DNA copies." MacKnight, *supra* note 2, at 304; *see also* ALBERTS ET AL., *supra* note 1, at 269.

RFLP is performed commercially by two companies in the United States: Lifecodes Corporation of Valhalla, New York, and Cellmark Diagnostics of Germantown, Maryland. Shapiro & Weinberg, *supra* note 3, at 486 n.7; Longobardi, *supra* note 20, at 357 n.35.

38. MD. ANN. CODE art. 88B, § 12A (1994).

39. *See generally* Connors, *supra* note 11, at 857 (mentioning no specific type of testing procedure which should be utilized).

40. *See supra* note 37.

41. *See, e.g.*, Keirse v. State, 106 Md. App. 551, 559-60, 665 A.2d 700, 704 (1995) (stating that "the legislature [and appellate courts in other jurisdictions have] expressly recognized RFLP as a reliable method of DNA profiling"); Cobey v. State, 80 Md. App. 31, 34-36, 559 A.2d 391, 392-93 (1989) (holding that DNA fingerprinting is admissible into evidence and is generally accepted in the scientific community).

42. Cobey, 80 Md. App. at 38-40, 559 A.2d at 395-96; David G. Parks, *DNA Evidence in the Courtroom*, 25 LABORATORY MED. 671, 672 (1994); MacKnight, *supra* note 2, at 296-97; Longobardi, *supra* note 20, at 326.

Step 1. The nucleated cells are extracted from the biological sample.<sup>43</sup> The cells are chemically broken open, and then the released DNA is purified.<sup>44</sup>

Step 2. The DNA is cut at specific sites into small fragments of differing size and molecular weight by restriction endonucleases.<sup>45</sup>

Step 3. The fragments are separated according to size and weight by an electro-chemical sorting process called gel electrophoresis.<sup>46</sup>

Step 4. The two strands of the double-helix fragments are chemically separated.<sup>47</sup> "The bases between the strands are unhooked, leaving the bases on each of the two strands attached."<sup>48</sup> The traditional analogy is that of a zipper being unzipped.<sup>49</sup> Therefore, the double-stranded DNA fragments are denatured<sup>50</sup> to form single stranded DNA fragments.<sup>51</sup>

Step 5. The fragments are transferred from the gel to a sheet of nitrocellulose or a nylon membrane<sup>52</sup> and are received in exactly the same position that they occupied in the gel.<sup>53</sup>

Step 6. Radioactively labeled DNA probes<sup>54</sup> are washed over the nitrocellulose sheet.<sup>55</sup>

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43. Parks, *supra* note 42, at 672.

44. *Cobey*, 80 Md. App. at 38, 559 A.2d at 395; Parks, *supra* note 42, at 672.

45. *Cobey*, 80 Md. App. at 38, 559 A.2d at 395; Parks, *supra* note 42, at 672. Restriction endonucleases "recognize specific base sequences in double-helical DNA and cleave both strands of the duplex at specific sites." STRYER, *supra* note 24, at 118.

46. Gel electrophoresis is accomplished in the following manner: The DNA sample is placed in a gel which has a positively charged electric pole attached to one end and a negatively charged electric pole attached to the other. Parks, *supra* note 42, at 672. An electrical current is then run through the gel for an established period of time. *Id.* DNA has a natural negative charge, therefore, as a result of the electrical charge the fragments will move from the end where the negatively charged pole is located to the end where the positively charged pole is located. *Id.* The larger, heavier fragments of DNA move more slowly and thus a shorter distance as compared to the smaller, lighter fragments. *Id.* As a result, the DNA fragments will be orderly arranged along parallel lines. *Id.*

47. *Cobey*, 80 Md. App. at 39, 559 A.2d at 395.

48. Parks, *supra* note 42, at 672.

49. *Cobey*, 80 Md. App. at 39, 559 A.2d at 395; Parks, *supra* note 42, at 672.

50. "When a protein is 'denatured,' it is 'heated or exposed to high pH in order to separate its strands.'" Longobardi, *supra* note 20, at 357 n.52 (citing White & Lalouel, *Chromosome Mapping with DNA Markers*, 258 SCI. AM. 40 (1988)).

51. Parks, *supra* note 42, at 672.

52. *Cobey*, 80 Md. App. at 39, 559 A.2d at 395; Parks, *supra* note 42, at 672.

53. Parks, *supra* note 42, at 672. This process, in step 5, is known as "Southern Blotting," named after the researcher who developed the technique. See *Cobey*, 80 Md. App. at 39, 559 A.2d at 395.

54. These radioactively labelled probes "are designed to seek out a predetermined locus in a polymorphic (highly variable) region of the DNA. Upon finding a DNA fragment that carries all or part of its complementary base sequence, the

Step 7. A sheet of x-ray film is placed against the nitrocellulose sheet, and when the film is processed the radioactive probes show up as dark bands.<sup>56</sup>

Step 8. The dark bands are then compared against banding patterns of other test samples.<sup>57</sup>

In comparing the banding patterns, the presence of identical banding patterns in two different samples may indicate that the samples originated from the same source because, except for identical twins, "banding patterns are unique to each individual."<sup>58</sup> However, these "predictions are statistical expectations based only on probability."<sup>59</sup> Population geneticists use a statistical formula<sup>60</sup> to determine the probability that two different samples, having identical banding patterns, originated from the same source.<sup>61</sup>

### III. THE CONSTITUTIONAL IMPLICATIONS OF STATE DNA DATA BANK LEGISLATION—CURRENT CASE LAW

There have been only a handful of cases across the country, in both the federal and the state courts, that have addressed the constitutionality of DNA data bank statutes. The following sections will discuss these cases. The cases are categorized by state and are then listed in chronological order based on the earliest decision challenging that state's DNA data bank statute.

#### A. Virginia's DNA Data Bank Statute—Federal Court Decisions

Virginia enacted legislation in 1990 that "established a state DNA data bank and procedures for the 'collection, analysis and exchange of DNA information for the purpose of criminal law enforcement.'"<sup>62</sup> The decision of the United States District Court for

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probe will bind to the fragments." *Cobey*, 80 Md. App. at 40, 559 A.2d at 395-96.

55. This process is called hybridization. *Id.* at 39, 559 A.2d at 395.

56. The x-ray photograph is called an autoradiograph. Parks, *supra* note 42, at 672.

57. MacKnight, *supra* note 2, at 297.

58. Longobardi, *supra* note 20, at 330.

59. *Id.* at n.59 (emphasis omitted) (citing J. BAKER & G. ALLEN, *THE STUDY OF BIOLOGY* 452 (4th ed. 1982)).

60. This statistical formula is known as the Hardy-Weinberg Equilibrium. *Id.* at 330-31. "The Hardy-Weinberg principle is expressed algebraically as  $P^2 + 2PQ + Q^2 = 1$ , where P and Q are the percentage of the population having two different [alternative forms of a gene, for example, the percentage of the population having brown hair]." *People v. Castro*, 545 N.Y.S.2d 985, 993 (N.Y. Sup. Ct. 1989).

61. Longobardi, *supra* note 20, at 330-31 & n.66.

62. O'Brien, *supra* note 36, at 796 (quoting *Jones v. Murray*, 962 F.2d 302, 304 (4th Cir.), *cert. denied*, 113 S. Ct. 472 (1992)); see VA. CODE ANN. §§ 19.2-310.2 to -310.7 (Michie 1990).



the Western District of Virginia in *Jones v. Murray*<sup>63</sup> was the first decision in the nation upholding a DNA data bank statute.<sup>64</sup>

In *Jones*, inmates brought a § 1983 action challenging the constitutionality of Virginia's statute,<sup>65</sup> which required that convicted felons provide a blood sample for DNA analysis.<sup>66</sup> Plaintiffs asserted that the statute violated four distinct constitutional rights. Specifically, the plaintiffs argued: (1) that their Fourth Amendment right against unreasonable searches and seizures was violated when their blood was taken and analyzed,<sup>67</sup> (2) that their Fourth Amendment right to privacy was violated by the statute,<sup>68</sup> (3) that the statute violated the Ex Post Facto Clause for those plaintiffs convicted prior to the effective date of the statute,<sup>69</sup> and (4) that, because the blood test constituted a condition of parole, the statute interfered with the vested liberty interest of mandatory parole for those plaintiffs who were convicted prior to the statute's effective date.<sup>70</sup>

The district court began its analysis of the plaintiffs' right to be free from unreasonable searches and seizures by acknowledging that the Fourth Amendment<sup>71</sup> protected individuals against unreasonable searches and seizures<sup>72</sup> and that blood tests constituted searches within the Fourth Amendment.<sup>73</sup> The court noted that although a warrant issued upon probable cause is generally the measure of a reasonable search,<sup>74</sup> there are "special needs, beyond the normal needs of law enforcement [which] make the warrant and probable-cause requirement impracticable."<sup>75</sup> The court cited several Supreme Court cases in an attempt to explain the "special needs" exception.<sup>76</sup> However,

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63. *Jones v. Murray*, 763 F. Supp. 842 (W.D. Va. 1991), *aff'd in part and rev'd in part*, 962 F.2d 302 (4th Cir.), *cert. denied*, 113 S. Ct. 472 (1992).

64. *Judge Holds Virginia's DNA Databank Proposal Constitutional*, U.S. NEWSWIRE, Mar. 4, 1991.

65. VA. CODE ANN. §§ 19.2-310.2 to -310.7 (Michie 1990).

66. *Jones*, 763 F. Supp. at 843.

67. *Id.* at 844.

68. *Id.*

69. *Id.*

70. *Id.*

71. The right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated, and no warrants shall issue, but upon probable cause, supported by oath or affirmation, and particularly describing the place to be searched, and the persons or things to be seized. U.S. CONST. amend. IV.

72. *Jones v. Murray*, 763 F. Supp. 842, 844 (W.D. Va. 1991) (citing *United States v. Sharpe*, 470 U.S. 675, 682 (1985)).

73. *Id.* (citing *Schmerber v. California*, 384 U.S. 757 (1966)).

74. *Id.* (citing *Griffin v. Wisconsin*, 483 U.S. 868 (1987)).

75. *Id.* (quoting *New Jersey v. T.L.O.*, 469 U.S. 325, 351 (1985)).

76. *Id.* (citing *Griffin v. Wisconsin*, 483 U.S. 868 (1987); *O'Connor v. Ortega*, 480 U.S. 709 (1987); *New Jersey v. T.L.O.*, 469 U.S. 325 (1985)).

[n]o clear test defines the "special needs" exception; . . . an analysis of . . . Supreme Court cases [which have invoked the exception] reveals that four themes are discernible, although often difficult to apply: (1) the search facilitates the administrative operation of the agency; (2) the officials conducting the search lack the training to be able to determine probable cause; (3) the object of the search has a diminished privacy expectation; and (4) the circumstances surrounding the search create enhanced governmental interests.<sup>77</sup>

Furthermore, the court noted that individualized suspicion was not an indispensable component of reasonableness in every circumstance.<sup>78</sup> The district court explained: "In limited circumstances, where the privacy interests implicated by the search are minimal, and where an important governmental interest furthered by the intrusion would be placed in jeopardy by a requirement [of] individualizing suspicion, a search may be reasonable despite the absence of such suspicion."<sup>79</sup> Accordingly, the district court concluded that it was appropriate to apply a balancing test.<sup>80</sup>

The test used by the district court weighed the state's interests, or special needs beyond normal law enforcement, against the general privacy right of a person to be free from unjustified government intrusion.<sup>81</sup> In the state's favor, the district court found that the Commonwealth of Virginia had a compelling interest in using the DNA data bank for detecting and deterring recidivist acts.<sup>82</sup> Furthermore, the court found a "close and substantial relation" between DNA testing and the state's "goal of detecting suspects and deterring recidivism by convicted felons."<sup>83</sup>

The district court held that the Commonwealth of Virginia's interests outweighed the privacy interests of the plaintiffs for three reasons.<sup>84</sup> First, the court indicated that the extraction of blood involved a minimal degree of intrusion.<sup>85</sup> Second, the court stated

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77. Michael S. Vaughn & Rolando V. del Carmen, "Special Needs" in *Criminal Justice: An Evolving Exception to the Fourth Amendment Warrant and Probable Cause Requirements*, 3 GEO. MASON U. CIV. RTS. L.J. 203, 210 (1993).

78. *Jones v. Murray*, 763 F. Supp. 842, 845 (W.D. Va. 1991) (citing *Skinner v. Railway Labor Executives' Ass'n*, 489 U.S. 602, 624 (1989)).

79. *Skinner v. Railway Labor Executives' Ass'n*, 489 U.S. 602, 624 (1989).

80. *Jones*, 763 F. Supp. at 845-48.

81. *Id.*

82. *Id.* at 846-47.

83. *Id.* at 847 (citing *National Treasury Employees Union v. Von Raab*, 489 U.S. 656, 676 (1989)).

84. *Id.* at 847-48.

85. *Id.* (citing *Schmerber v. California*, 384 U.S. 757, 771 (1966)).

that an "individual ha[d] no [c]onstitutional right to privacy in his identity,"<sup>86</sup> and, thus, "[t]o the extent that the DNA analysis reveal[ed] identification characteristics only, plaintiffs d[id] not indicate a legitimate expectation of privacy."<sup>87</sup> Third, the court pointed out that convicted persons have limited privacy rights.<sup>88</sup> For example, the Supreme Court has held that prisoners are required to submit to searches of their cellblocks and their body cavities.<sup>89</sup> Hence, the court held that the statute "d[id] not violate plaintiffs' Fourth Amendment rights because plaintiffs' limited interest in withholding a blood sample [wa]s outweighed by the substantial [s]tate interest in deterring and detecting recidivist acts."<sup>90</sup>

The district court summarily rejected the plaintiffs' second challenge—that their Fourth Amendment right to privacy was violated. Relying upon its discussion of the plaintiffs' privacy rights in the earlier Fourth Amendment challenge, the district court concluded that the Commonwealth did not violate the plaintiffs' right to privacy by analyzing a convicted felon's blood sample and storing the profile in a data bank.<sup>91</sup>

The district court also rejected the plaintiffs' third challenge.<sup>92</sup> Although Virginia's DNA data bank statute did not become effective until July 1, 1990, prisoners who were convicted before this date were required to provide a blood sample before they could be released from prison.<sup>93</sup> The plaintiffs argued that this requirement violated the Ex Post Facto Clause<sup>94</sup> of Article I of the United States Constitution.<sup>95</sup> The district court explained that the blood sample was merely taken for the procedural purpose of establishing the DNA bank and not to punish convicted felons for their past crimes.<sup>96</sup> Because an Ex

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86. *Id.* at 848.

87. *Id.* at 847.

88. *Id.* at 848.

89. *See, e.g., Hudson v. Palmer*, 468 U.S. 517 (1984) (holding that an inmate had no expectation of privacy in his prison cell entitling him to protection under the Fourth Amendment against unreasonable searches); *Bell v. Wolfish*, 441 U.S. 520 (1979) (holding that body cavity searches of pretrial detainees did not violate the Fourth Amendment).

90. *Jones*, 763 F. Supp. at 851.

91. *Id.*

92. *Id.* at 850.

93. *Id.* at 849.

94. "A statute violates the Ex Post Facto Clause if the law alters the legal consequences of acts occurring before its enactment to the disadvantage of the offender affected by it." *Id.* at 849 (citing *Calder v. Bull*, 1 L.Ed. 648 (1798)).

95. "Neither Congress nor any state shall . . . pass any . . . ex post facto Law . . ." U.S. CONST. art. I, § 10, cl. 1. *Miller v. Florida*, 482 U.S. 423, 429 (1987) (citing the Ex Post Facto Clause of the Constitution and discussing the Ex Post Facto prohibition).

96. *Jones*, 763 F. Supp. at 850.

Post Facto violation does not occur "if the change in the law is merely procedural and does not increase the punishment," the court held that the statute did not violate the Ex Post Facto Clause.<sup>97</sup>

Finally, the court dismissed the plaintiffs' fourth argument—that providing a blood sample constituted a condition for parole eligibility.<sup>98</sup> The court held that the statute could be read in a manner "so as not to violate plaintiffs' liberty interests."<sup>99</sup> Therefore, inasmuch as a convicted felon's release date implicates a protected liberty interest, a "prisoner must be given some process before he is held beyond his established parole release date."<sup>100</sup>

On appeal to the United States Court of Appeals for the Fourth Circuit, the appellants argued that the district court erred in holding that the statute: (1) did not violate the Fourth Amendment<sup>101</sup> and (2) did not violate the constitutional prohibition against Ex Post Facto laws.<sup>102</sup> The court of appeals affirmed the decision of the district court except to the extent that the statute could be enforced to modify mandatory parole conditions.<sup>103</sup>

Interestingly, with respect to the district court's inquiry of the Fourth Amendment claim, the majority of the court of appeals declined to address the "special needs" analysis.<sup>104</sup> Instead, the court of appeals concluded that convicted prisoners and probationers "lose a right of privacy from routine searches . . . ."<sup>105</sup> Therefore, the reviewing court weighed the Commonwealth's law enforcement interest in ascertaining the identifying characteristics of persons who commit crimes against the limited privacy interests of convicted felons and the minor intrusion caused by taking a blood sample.<sup>106</sup> The court concluded that the Commonwealth's interest outweighed the convicted felons' interest and, thus, that the data bank statute did not violate the Fourth Amendment.<sup>107</sup>

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97. *Id.* (quoting *Hopt v. Utah*, 110 U.S. 574, 590 (1884)).

98. *Id.*

99. *Id.* at 851.

100. *Id.*

101. *Jones v. Murray*, 962 F.2d 302, 303 (4th Cir. 1992).

102. *Id.*

103. *Id.* at 303, 310-11.

104. *Id.* at 306-07 n.2.

105. *Id.* at 306. The court of appeals made this assertion relying on the Supreme Court's decisions in *Griffin v. Wisconsin*, 483 U.S. 868, 880 (1987) (determining that probationers had a limited right of privacy against searches of their homes pursuant to a program to ensure rehabilitation and safety), *Hudson v. Palmer*, 468 U.S. 517, 530 (1984) (holding that inmate had no expectation of privacy in his prison cell entitling him to protection against unreasonable searches and seizures under the Fourth Amendment), and *Bell v. Wolfish*, 441 U.S. 520, 559-60 (1979) (holding that body cavity searches of pretrial detainees did not violate the Fourth Amendment).

106. *Jones*, 962 F.2d at 307.

107. *Id.* at 307-08.

In a concurring opinion, Judge Murnaghan noted that the “appellants ha[d] not forfeited their expectation of privacy with respect to blood testing.”<sup>108</sup> Notwithstanding a prisoner’s expectation of privacy, Judge Murnaghan stated: “DNA testing procedure[s] . . . may be justified”<sup>109</sup> by a reasonable application of the balancing test, which weighs the “privacy interest involved against the state interest in the search.”<sup>110</sup>

Next, the court of appeals addressed the plaintiffs’ claim that the statute violated the Ex Post Facto Clause.<sup>111</sup> The court of appeals agreed with the district court’s finding that DNA testing is not penal in nature.<sup>112</sup> Furthermore, relying on the Supreme Court’s decision in *Warden v. Marrero*,<sup>113</sup> the court stated that “violators c[ould] be administratively punished for failure to provide samples.”<sup>114</sup> The court of appeals, however, indicated that the first five words of the statute<sup>115</sup> authorized a modification of mandatory parole and, thus, this statute violated the prohibition against Ex Post Facto laws.<sup>116</sup> The court of appeals concluded that the DNA data bank statute

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108. *Id.* at 312 (Murnaghan, J., concurring).

109. *Id.* at 313.

110. “Justification . . . must be based . . . on a balancing of the privacy interest involved against the state interest in the search to determine which interest is more compelling.” *Id.* at 313 (citing *Michigan Dept. of State Police v. Sitz*, 496 U.S. 444 (1990)).

111. *Jones*, 962 F.2d at 309-10.

112. *Id.* at 309.

113. 417 U.S. 653, 661-64 (1974) (holding that a repeal of parole eligibility imposed greater punishment than was prescribed by law at the time of the offense).

114. *Jones*, 962 F.2d at 310. For example, inmates may be denied “good-time” credits. *Id.*

Recently, the United States Court of Appeals for the Fourth Circuit held that prison regulations reducing good conduct time credits for inmates refusing to provide blood samples for the DNA information bank violated neither the Ex Post Facto Clause nor the prisoners’ due process rights, even assuming that the good conduct time credit system had created a protected liberty interest. *Ewell v. Murray*, 11 F.3d 482 (4th Cir. 1993), *cert. denied*, 114 S. Ct. 2112 (1994).

115. “*Notwithstanding the provisions of 53.1-159* [the mandatory release on parole requirement], any person convicted of a felony who is in custody after July 1, 1990, shall provide a blood sample prior to his release.” VA. CODE ANN. § 19.2-310.2 (emphasis added).

116. *Jones*, 962 F.2d at 310-11. The Fourth Circuit later re-affirmed its holding that Virginia’s DNA data bank statute violated the Ex Post Facto Clause “to the extent section 19.2-310.2 purport[ed] to allow prison officials to hold an inmate beyond the mandatory parole date.” *Al-Wahhab v. Murray*, No. 91-7145, 1992 U.S. App. LEXIS 27500, at \*2 (4th Cir. Oct. 16, 1992); *see also Carey v. City of Richmond*, No. 91-7337, 1992 U.S. App. LEXIS 17864, at \*2 (4th Cir. July 30, 1992) (holding that “Virginia’s DNA data bank regulations create an Ex Post Facto problem when used to delay an inmate’s release beyond his mandatory parole release date”).

could be upheld merely by eliminating the Ex Post Facto sanction.<sup>117</sup>

*B. Minnesota's DNA Data Bank Statute—State Court Decision*

Minnesota enacted DNA analysis and data banking legislation in 1989.<sup>118</sup> The statute required an individual convicted of a sexual offense to provide a blood sample to the Minnesota Bureau of Criminal Apprehension (BCA).<sup>119</sup> The statute required BCA to adopt procedures for collecting, maintaining and analyzing the samples. As of 1991, however, the BCA had not yet adopted any protocols,<sup>120</sup> and blood samples were merely being stored until such time as these procedures could be adopted.<sup>121</sup>

The Minnesota statute was challenged, in *In re Z.P.B.*,<sup>122</sup> by a fifteen-year-old boy<sup>123</sup> who had been convicted of a sexual offense and who was ordered to submit a biological specimen for DNA analysis.<sup>124</sup> The appellant argued that the DNA analysis statute violated his constitutional right to due process of law because uniform procedures for maintaining or analyzing the specimen had not been adopted.<sup>125</sup> In rejecting this argument, the Court of Appeals of Minnesota concluded that:

Absent an actual attempt to use a specimen for some purpose, there can be no justiciable controversy regarding the adequacy of procedures and protocols employed when using the specimen for that purpose. The only direct and

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117. *Jones*, 962 F.2d at 311.

118. MINN. STAT. ANN. §§ 299C.155, 609.3461 (West 1991 & Supp. 1994); see McEwen & Reilly, *supra* note 6, at 943 (citing Minnesota's DNA data bank statute and generally discussing DNA data bank legislation).

119. *In re Z.P.B.*, 474 N.W.2d 651, 652 (Minn. Ct. App. 1991).

120. *Id.*

121. *Id.*

122. 474 N.W.2d 651 (Minn. Ct. App. 1991).

123. Interestingly, the Court of Appeals of Arizona, in *In re Appeal in Maricopa County*, Nos. 1 CA-JV 94-0063, 1 CA-JV 94-0081 and 1 CA-JV 95-0010, 901 P.2d 1205 (Ariz. Ct. App. 1995), held that "the juvenile court has neither express nor inherent authority to order a juvenile delinquent into the Arizona DNA Identification System." *Id.* at 1206-07. The court found that the "statutes for the Arizona DNA Identification System . . . apply only to persons who have been convicted of a sexual offense." *Id.* at 1207-08. "A juvenile delinquent is not such a person [because Arizona Statute] § 8-207(A) (1989) provides that adjudication of delinquency 'shall not be deemed a conviction.'" *Id.* The court of appeals indicated that the courts could not expand the Arizona DNA Identification System statutes because they were criminal code statutes. *Id.* at 1208. "Whether to include delinquent children in [the Arizona DNA Identification] [S]ystem is for the legislature to decide . . ." *Id.*

124. *In re Z.P.B.*, 474 N.W.2d at 652.

125. *Id.* at 653.

imminent injury that will result from the trial court order requiring appellant to provide a biological sample for DNA analysis is the intrusion that occurs when the required blood sample is withdrawn without appellant's consent. This limited intrusion does not violate appellant's due process rights.<sup>126</sup>

Accordingly, the court held that the requirement to provide a biological specimen for DNA analysis did not violate the appellant's constitutional right to due process of law.<sup>127</sup>

### C. *Washington's DNA Data Bank Statute—State Court Decision*

In 1989, the State of Washington enacted legislation that, as of July 1, 1990, would require any individual convicted of a sex offense or of a crime of violence to submit a blood sample for DNA identification analysis.<sup>128</sup> Among other things, a violent offense could include vehicular homicide caused by drunk or reckless driving.<sup>129</sup> In *State v. Olivas*,<sup>130</sup> seven convicted felons challenged court orders that required each of them to provide a blood sample for DNA purposes pursuant to Washington's DNA analysis statute.<sup>131</sup> Appellants raised three constitutional issues: (1) that the drawing of blood for DNA purposes constituted an unreasonable search and seizure under the Fourth Amendment,<sup>132</sup> (2) that the statute was unconstitutionally vague, which violated Appellants' right to due process under the Fifth and Fourteenth Amendments,<sup>133</sup> and (3) that the statute violated the appellants' right to equal protection of the laws under the Fifth and Fourteenth Amendments.<sup>134</sup>

The Supreme Court of Washington began its analysis by discussing the search and seizure issue as it had developed in cases such as *Schmerber v. California*<sup>135</sup> and *Skinner v. Railway Labor Executives' Ass'n*.<sup>136</sup> In *Schmerber*, the United States Supreme Court addressed the issue of whether the warrantless extraction of blood in order to determine alcoholic content was an unconstitutional search

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126. *Id.* at 654.

127. *Id.*

128. WASH. REV. CODE § 43.43.754 (West Supp. 1994); see McEwen & Reilly, *supra* note 6, at 943 (citing Washington's DNA data bank statute and generally discussing DNA data bank legislation).

129. See WASH. REV. CODE ANN. § 9.94A.030(36) (West Supp. 1995).

130. 856 P.2d 1076 (Wash. 1993) (en banc).

131. *Id.* at 1077-80.

132. *Id.* at 1080.

133. *Id.*

134. *Id.*

135. 384 U.S. 757 (1966).

136. 489 U.S. 602 (1989).

and seizure under the Fourth Amendment.<sup>137</sup> The Court held that the extraction of blood constituted a reasonable search under the Fourth Amendment.<sup>138</sup> Further, the Court held that a warrant was not required for this type of search; an exigency, or emergency situation, existed because blood-alcohol content could diminish quickly.<sup>139</sup>

In *Skinner*, the Supreme Court upheld the constitutionality of a federal regulation that required railroad employees to submit to breath and urine testing for drug and alcohol use, although there was no individualized suspicion.<sup>140</sup> The Court held that such tests were "searches" under the Fourth Amendment<sup>141</sup> but that the government's strong and compelling interest in regulating the conduct of railroad employees in order to ensure public safety presented "special needs beyond law enforcement" justifying a departure from the ordinary warrant and probable cause requirements for a search.<sup>142</sup>

In *Olivas*, the State of Washington relied upon *Schmerber* and argued that the extraction of blood was conducted incident to the petitioner's arrest.<sup>143</sup> The Supreme Court of Washington rejected this argument because the blood samples in the instant cases were "used solely for DNA identification of offenders after conviction and would not be considered 'incident to arrest' under [*Schmerber*]." <sup>144</sup> Instead, the majority of the court adopted the approach taken by the Supreme Court in *Skinner*<sup>145</sup> and in *National Treasury Employees Union v. Von Raab*<sup>146</sup> as well as the approach utilized by the United States District Court for the Western District of Virginia in *Jones v. Murray*.<sup>147</sup> These approaches "affirmed general privacy rights by requiring 'special needs beyond normal law enforcement' for drawing blood from convicted persons without probable cause or individualized suspicion."<sup>148</sup>

In *Olivas*, with respect to the search and seizure issue a concurring judge argued: "'[S]pecial needs' is only relevant where the [s]tate's need is beyond that of ordinary law enforcement, [thus] it

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137. *Schmerber*, 384 U.S. at 766-72.

138. *Id.* at 767-70.

139. *Id.* at 770-72.

140. *Skinner*, 489 U.S. at 634.

141. *Id.* at 616-17.

142. *Id.* at 619-33.

143. *State v. Olivas*, 856 P.2d 1076, 1083 (Wash. 1993) (en banc) (quoting *Schmerber v. California*, 384 U.S. 757, 771 (1966)).

144. *Id.* at 1084.

145. 489 U.S. 602 (1989).

146. 489 U.S. 656 (1989) (upholding the Custom Service's drug testing program by applying the "special needs" exception).

147. 763 F. Supp. 842 (W.D. Va. 1991).

148. *State v. Olivas*, 856 P.2d 1076, 1086 (Wash. 1993) (en banc).



is not applicable to these cases.”<sup>149</sup> The concurring judge concluded that the DNA testing statute should be “analyzed under traditional principles of Fourth Amendment law”<sup>150</sup> and opined that the extraction of blood and subsequent DNA testing for identification purposes was minimally intrusive and was, therefore, an exception to the general warrant and the probable cause requirements.<sup>151</sup>

Appellants also argued that the statute violated their right to due process of law because it was unconstitutionally vague on its face with respect to the procedure used in drawing their blood.<sup>152</sup> The appellants had the burden of establishing that the DNA testing statute was unconstitutionally vague beyond a reasonable doubt in order to have it struck down.<sup>153</sup> The court concluded that the appellants failed to meet this burden.<sup>154</sup>

Finally, the appellants claimed that the statute, which only applied to individuals who had committed sex offenses or violent offenses, violated their Fourteenth Amendment right to equal protection of the laws.<sup>155</sup> Under an equal protection challenge, one of three levels of scrutiny is utilized: (1) When a fundamental right or a suspect class is involved, the court will apply a strict scrutiny standard;<sup>156</sup> (2) when a semi-suspect class is involved, the court will apply an intermediate level of scrutiny;<sup>157</sup> and (3) when none of these

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149. *Id.* at 1090 (Utter, J., concurring).

150. *Id.* at 1091. For example, the statute should be analyzed under the minimally intrusive search exception to the general warrant and probable cause requirements. *Id.* at 1091-92.

151. *Id.* at 1094.

152. *Id.* at 1086.

153. *Id.*

154. *Id.* at 1086-87.

155. *Id.* at 1087.

156. *Id.* If strict scrutiny is applied to a particular law, the law will only be upheld if it is necessary to achieve a compelling governmental interest and is narrowly tailored to achieve that end. *See, e.g.,* *Yick Wo v. Hopkins*, 118 U.S. 356 (1886) (indicating that a classification based on race is the classic example of a suspect classification and invoking strict scrutiny); *Richmond v. J.A. Croson Co.*, 488 U.S. 469 (1989) (holding any governmental action that is explicitly race-based must be necessary to achieve a compelling governmental interest); *Harper v. Virginia Bd. of Elections*, 383 U.S. 663 (1966) (applying the strict scrutiny standard because the right to vote is a fundamental right).

157. *Olivas*, 856 P.2d at 1087. The intermediate level of scrutiny requires that the semi-suspect classification be substantially related to important governmental objectives. *See, e.g.,* *Craig v. Boren*, 429 U.S. 190 (1976) (articulating the applicable standard as being that semi-suspect classifications “must serve important governmental objectives and must be substantially related to achievement of those objectives”). Classifications based on sex, alienage and illegitimacy are considered semi-suspect classes which require the use of mid-level scrutiny. *See, e.g., id.* (holding that gender based classifications warrant an intermediate level of scrutiny); *Plyler v. Doe*, 457 U.S. 202 (1982) (applying

rights or classes are involved, the court will apply a rational relationship standard.<sup>158</sup> The court determined that because neither a fundamental liberty interest nor a suspect class was involved, the correct standard of scrutiny was the rational basis standard.<sup>159</sup> Subsequently, the court found a rational relationship between “the interest of the government in law enforcement,”<sup>160</sup> which was to investigate and prosecute sex offenses and violent offenses, and “the application of the statute to this class of persons.”<sup>161</sup> Thus, the court held that the statute did not violate the Equal Protection Clause.<sup>162</sup>

#### D. Illinois's DNA Data Bank Statute—State Court Decision

In 1989, the Illinois legislature enacted a statute that required convicted sex offenders to submit blood and saliva specimens for DNA analysis.<sup>163</sup> In *People v. Wealer*,<sup>164</sup> the defendant appealed an

the intermediate level of scrutiny to a statute which allowed school districts to deny free public education to illegal-alien children); *Clark v. Jeter*, 486 U.S. 456 (1988) (applying the intermediate level of review for classifications disadvantaging illegitimates).

158. *Olivas*, 856 P.2d at 1087. The standard for the lowest level of review is that the statute will not be stricken if it is conceivable that there is some rational relation between the means selected by the legislature and a legitimate legislative objective. *See, e.g.*, *United States R.R. Retirement Bd. v. Fritz*, 449 U.S. 166 (1980) (holding that the legitimate purpose advanced by the statute's defender was rationally related to the classification).

159. *Olivas*, 856 P.2d at 1087.

160. *Id.*

161. *Id.*

162. *Id.*

163. ILL. REV. STAT. ch. 38, par. 1005-4-3 (1991); *see also* *People v. Wealer*, 636 N.E.2d 1129 (Ill. App. Ct. 1994) (quoting portions of the Illinois DNA testing statute); *McEwen & Reilly, supra* note 6, at 943 (citing Illinois's DNA data bank statute and generally discussing DNA data bank legislation).

164. 636 N.E.2d 1129 (Ill. App. Ct. 1994). The Illinois DNA data bank statute was also challenged in *Gilbert v. Peters*, Nos. 93 C 20012, 92 C 20354, 1994 U.S. Dist. LEXIS 9215 (N.D. Ill. June 28, 1994). In *Gilbert*, prison inmates claimed that the statute violated the Fourth Amendment, the Equal Protection Clause of the Fourteenth Amendment, and the Ex Post Facto Clause. *Id.* at \*2, \*4. The district court rejected the Fourth Amendment challenge by employing a modification of the Fourth Circuit's approach in *Jones v. Murray*, 962 F.2d 302 (4th Cir. 1992). *Id.* at \*14 & n.5. Unlike the Fourth Circuit, the district court did not rely upon the theory that prisoners possessed a lesser expectation of privacy. Instead, it focused on the minimal intrusion imposed by DNA testing. *Id.* at n.5. In addition, the court held that the statute did not violate the Equal Protection Clause because a rational relationship between the interest of the government in law enforcement and application of the statute to this class of persons existed. *Id.* at \*25. The court also rejected the Ex Post Facto challenge, noting that the Illinois statute did not contain language like the Virginia DNA databank statute. *Id.* at \*\*30-31. Rather, the language in the Illinois statute was ambiguous and, therefore, may be interpreted by the court as not violating the Ex Post Facto Clause. *Id.* at \*\*31-32.

order of the trial court, which required the taking of blood and saliva samples pursuant to the DNA testing statute,<sup>165</sup> and asserted that the statute violated his right to be free from unreasonable searches and seizures.<sup>166</sup> After a complete analysis of the development of search and seizure case law, as well as a careful review of the current DNA data banking case law, the Appellate Court of Illinois adopted the traditional Fourth Amendment balancing test.<sup>167</sup> "Under this [traditional] approach, a reviewing court may balance the government's interest in conducting the search, the degree to which the search actually advances that interest, and the gravity of the intrusion upon personal privacy to determine whether the search is reasonable."<sup>168</sup>

The court determined that the statute's testing procedures imposed minimal physical intrusion.<sup>169</sup> In addition, the court held: "[T]he privacy interest that a convicted sex offender has in his or her identity is minimal."<sup>170</sup> As a result, the court balanced the state's closely related legitimate interest in deterring and prosecuting recidivist acts committed by sex offenders against the minimal physical intrusion imposed upon the convicted sex offender, who possessed a diminished privacy interest in his identity.<sup>171</sup> The court held that the statute did not violate the prohibition against unreasonable searches and seizures because the government's interest outweighed the defendant's personal privacy right.<sup>172</sup>

#### *E. Oregon's DNA Data Bank Statute—State and Federal Court Decisions*

In 1991, the State of Oregon enacted legislation that required persons convicted of murder, any sexual offense or any conspiracy or attempt to commit a sexual offense to submit a blood sample to the Department of Corrections.<sup>173</sup> In *State v. Orozco*,<sup>174</sup> the appellants challenged a court order that required a child to provide a blood sample for DNA testing pursuant to the DNA data bank statutes.<sup>175</sup>

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165. *Wealer*, 636 N.E.2d at 1130.

166. *Id.*

167. The traditional Fourth Amendment balancing test approach was articulated in the concurring opinions of *Jones v. Murray*, 962 F.2d at 311-13 (Murnaghan, J., concurring) and *State v. Olivas*, 856 P.2d at 1089-94 (Utter, J., concurring).

168. *Wealer*, 636 N.E.2d at 1135.

169. *Id.* at 1136.

170. *Id.*

171. *Id.* at 1135-37.

172. *Id.* at 1137.

173. OR. REV. STAT. §§ 137.076, 161.325(4), 181.085 (1994).

174. 878 P.2d 432 (Or. Ct. App. 1994) (en banc).

175. *Id.* at 433-34.

Appellants' challenges were based on state grounds as well as on the Fourth Amendment.<sup>176</sup>

In analyzing the Fourth Amendment challenge, the court recognized that a warrant was not necessary in certain limited circumstances when the search and seizure involved only a minimal intrusion.<sup>177</sup> In addition, the court recognized the minimally intrusive quality of blood extraction.<sup>178</sup> The court then applied the traditional balancing test set forth in *Brown v. Texas*,<sup>179</sup> which is used to determine whether the search and seizure is reasonable when the intrusion is minimal.<sup>180</sup> The court found that the prosecution of sexual offenses was an important government interest and that the taking of blood samples for a DNA data bank of sexual offenders directly furthered this government interest.<sup>181</sup> According to the court, this important and rationally related government interest outweighed the minimal intrusion upon personal privacy and, therefore, the court held that the DNA data bank statutes did not violate the Fourth Amendment.<sup>182</sup> Neither the concurrence<sup>183</sup> nor the dissent<sup>184</sup> directly addressed the Fourth Amendment challenge.

Oregon's DNA data banking laws<sup>185</sup> were also challenged in *Rise v. Oregon*.<sup>186</sup> In *Rise*, the crux of the appellants' argument, in a § 1983 action, was that the collection of blood samples pursuant to the DNA data bank laws violated the Fourth Amendment and the Ex Post Facto Clause.<sup>187</sup>

The district court found that the collection of blood under the DNA data banking laws did not violate the Fourth Amendment because "it served a 'special need' other than normal law enforcement and was related to effective penal administration."<sup>188</sup> The United States Court of Appeals for the Ninth Circuit affirmed the district court's decision on this issue but on slightly different grounds.<sup>189</sup> The court indicated that it found the laws to be constitutional even if their only objective was for law enforcement.<sup>190</sup>

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176. *Id.* at 434-36.

177. *Id.* at 435-36.

178. *Id.* at 436 (citing *Winston v. Lee*, 470 U.S. 753 (1985)).

179. 443 U.S. 47, 50-51 (1979).

180. *State v. Orozco*, 878 P.2d 432, 435-36 (Or. Ct. App. 1994) (en banc).

181. *Id.* at 436.

182. *Id.*

183. *Id.* at 436-39 (Rossman, Edmonds, & De Muniz, J.J., concurring).

184. *Id.* at 439-42 (Haselton, & Leeson, J.J., dissenting).

185. OR. REV. STAT. §§ 137.076, 161.325(4), 181.085 (1994).

186. 59 F.3d 1556 (9th Cir. 1995).

187. *Id.* at 1556.

188. *Id.* at 1559 (citations omitted).

189. *Id.*

190. *Id.*

The court of appeals acknowledged that the collection of blood samples implicated the Fourth Amendment<sup>191</sup> and that the Fourth Amendment only allowed for reasonable searches and seizures.<sup>192</sup> The court also recognized that reasonableness “generally depend[ed] on whether the search was made pursuant to a warrant issued upon probable cause.”<sup>193</sup> The court stated, however, that “the [s]tate [could] interfere with an individual’s Fourth Amendment interests with less than probable cause and without a warrant if the intrusion [w]as only minimal and [w]as justified by law enforcement purposes.”<sup>194</sup> The court determined, based upon the traditional fingerprinting analogy, that the intrusion upon a convicted felon’s privacy was minimal.<sup>195</sup> Further, relying upon *Skinner*,<sup>196</sup> the court determined that the intrusion upon the convicted felon’s physical integrity was also minimal.<sup>197</sup> In addition, the court explained that the state provided evidence that a DNA data bank would deter recidivism and would help the state to identify and to prosecute accurately the perpetrators of future offenses.<sup>198</sup> After balancing the minimal intrusion upon the convicted felon’s privacy interests and physical integrity against the state’s incontestable interest in preventing recidivism and in identifying and prosecuting such felons, the court held that the Fourth Amendment was not violated.<sup>199</sup> The court decided the Fourth Amendment issue by applying the balancing approach that utilized more traditional principles regarding the Fourth Amendment as opposed to the balancing test used by the district court, which included the “special needs” exception.

The appellants in *Rise* were convicted prior to the enactment of Oregon’s DNA data bank laws.<sup>200</sup> Therefore, the appellants argued that the collection of blood samples from them violated the Ex Post Facto Clause.<sup>201</sup> The court determined that the DNA data bank laws could raise Ex Post Facto concerns only if the laws subjected appellants to increased punishment.<sup>202</sup> “[L]egislation may lawfully impose

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191. *Rise v. Oregon*, 59 F.3d 1556, 1558-59 (9th Cir. 1995) (citing *Skinner v. Railway Labor Executives’ Ass’n*, 489 U.S. 602, 616 (1989) and *Schmerber v. California*, 384 U.S. 757, 767 (1966)).

192. *Id.* at 1559 (citing *Skinner v. Railway Labor Executives’ Ass’n*, 489 U.S. 602, 619 (1989)).

193. *Id.* (citing *United States v. Place*, 462 U.S. 696, 701 (1983)).

194. *Id.*

195. *Id.*

196. 489 U.S. 602, 625 (1989).

197. *Rise*, 59 F.3d at 1559.

198. *Id.* at 1561.

199. *Id.* at 1562.

200. *Id.*

201. *Id.*

202. *Id.*

new requirements on convicted persons if the statute's 'overall design and effect' indicates a 'non-punitive intent.'"<sup>203</sup> The court then held that the DNA data bank laws did not violate the Ex Post Facto Clause because the purpose of the DNA data bank laws was to assist in the identification and accurate prosecution of criminals and not to punish convicted murderers or sexual offenders.<sup>204</sup>

Judge Nelson strenuously dissented from the majority's holding—that the collection of blood from a convicted murderer or sexual offender without a warrant or individualized suspicion, in order to create a DNA data bank, did not violate the Fourth Amendment.<sup>205</sup> In his dissenting opinion, Judge Nelson disputed the majority's conclusion that *Schmerber v. California*<sup>206</sup> broadly stood for the premise that forced blood extraction was a de minimis concern.<sup>207</sup> Rather, Judge Nelson argued that *Schmerber* stood for the premise that the non-consensual taking of blood without a warrant was permissible *only when law enforcement faced an exigent circumstance* and not for the creation of a DNA data bank.<sup>208</sup>

The dissent also argued that the "special needs beyond normal law enforcement" rationale could not be relied upon because it only applied to regulatory contexts where apprehension of criminals was not involved.<sup>209</sup> Further, unless the case involved voluntary participants in a highly regulated context, the "special needs" approach almost always required individualized suspicion.<sup>210</sup> Additionally, the dissenting judge claimed that the majority could not rely on the fact that prison inmates lost those individual privacy rights that served penological needs because the DNA data bank statute had nothing to do with prison administration.<sup>211</sup> The dissent concluded: "[T]he majority has sacrificed a precious constitutional protection[—the Fourth Amendment protection against unreasonable searches and seizures—]in the name of greater police efficiency . . . ."<sup>212</sup>

#### F. North Carolina's DNA Data Bank Statute—Federal Court Decision

In 1993, the North Carolina General Assembly passed legislation that established a DNA data bank.<sup>213</sup> In the 1994 case of *Sanders v.*

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203. *Id.* (citing *United States v. Huss*, 7 F.3d 1444, 1447 (9th Cir. 1993)).

204. *Id.*

205. *Id.* at 1564-71 (Nelson, J., dissenting).

206. 384 U.S. 757 (1966).

207. *Rise v. Oregon*, 59 F.3d 1556, 1564 (9th Cir. 1995) (Nelson, J., dissenting).

208. *Id.*

209. *Id.* at 1567.

210. *Id.* at 1567-68.

211. *Id.* at 1568-69.

212. *Id.* at 1571.

213. N.C. GEN. STAT. §§ 15A-266 to -270 (1994).

*Coman*,<sup>214</sup> several inmates brought a § 1983 action seeking protection from the North Carolina DNA data bank statutes, which required that the inmates submit blood samples.<sup>215</sup> Plaintiffs argued: (1) that the collection of blood samples in accordance with the DNA data bank statutes violated the Fourth Amendment, which requires a finding of probable cause or of individualized suspicion in order for the search and seizure to be considered reasonable,<sup>216</sup> and (2) that the DNA data bank statutes, and the use of force authorized thereunder, violated their Eighth Amendment protection against cruel and unusual punishment.<sup>217</sup>

Relying on *Jones v. Murray*,<sup>218</sup> the United States Court of Appeals for the Fourth Circuit quickly dismissed the plaintiffs' Fourth Amendment claim.<sup>219</sup> The court indicated that it was bound by the *Jones* decision, which held that extracting a blood sample in compliance with Virginia's DNA data bank statute did not violate the Fourth Amendment.<sup>220</sup>

The court then addressed the plaintiffs' Eighth Amendment cruel and unusual punishment challenge. "[I]n order to violate the Eighth Amendment's prohibition of cruel and unusual punishment, the force challenged must have been used for the purpose of causing harm."<sup>221</sup> The court held that there was not enough evidence to support the idea that the force used to obtain the blood samples for the DNA data bank was applied with the intention of causing the inmates harm.<sup>222</sup> The court also stated that correctional officers may use reasonable force under the circumstances in order to effectuate compliance with the statute.<sup>223</sup> Again, the court explained that there was no evidence to indicate that the correctional officers conducted themselves in a manner which displayed an extraordinary lack of due care for the inmates' interest or safety.<sup>224</sup> Therefore, the court found no violation of the Eighth Amendment.<sup>225</sup>

#### G. *Kansas's DNA Data Bank Statute—Federal Court Decision*

Kansas's DNA data bank statute, enacted in 1991, requires individuals who have been convicted of murder, or of certain sex

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214. 864 F. Supp. 496 (E.D.N.C. 1994).

215. *Id.*

216. *Id.* at 498.

217. *Id.*

218. 962 F.2d 302 (4th Cir. 1992).

219. *Sanders*, 864 F. Supp. at 499.

220. *Id.* at 499.

221. *Id.* at 500.

222. *Id.* at 501.

223. *Id.* at 500.

224. *Id.*

225. *Id.*

offenses, to submit a blood sample for DNA analysis.<sup>226</sup> The constitutionality of this statute was challenged in *Vanderlinden v. State*.<sup>227</sup> In *Vanderlinden*, the plaintiffs argued that the statute was unconstitutional because: (1) the statute violated the Fourth Amendment; (2) the statute infringed on an inmate's privacy interest; (3) the statute violated the Eighth Amendment's protection against cruel and unusual punishment; (4) the statute violated the Ex Post Facto Clause; (5) the statute was the equivalent of a Bill of Attainder; and (6) the statute violated the Equal Protection Clause.<sup>228</sup>

With regard to the Fourth Amendment challenge, the court recognized that blood tests were searches<sup>229</sup> and, therefore, turned its attention to whether or not such searches were reasonable.<sup>230</sup> The court relied upon the approach taken by the Fourth Circuit in *Jones v. Murray*.<sup>231</sup> In *Jones*, the Fourth Circuit held that convicted persons had a lesser expectation of privacy with respect to routine searches.<sup>232</sup> Thus, in *Jones*, the Commonwealth of Virginia's interest in law enforcement outweighed the limited privacy interests of the convicted individual.<sup>233</sup> In *Vanderlinden*, the court similarly held that the search was not unreasonable and, therefore, that it did not violate the Fourth Amendment.<sup>234</sup>

The court then analyzed the plaintiffs' claim that the statute infringed upon their privacy interest. The court broadly asserted: "In or out of prison, [a] plaintiff has only a limited privacy interest in not having his blood tested."<sup>235</sup> Further, the court held that the government's compelling interest in law enforcement outweighed the limited privacy interests of a convicted individual.<sup>236</sup>

The court's resolution of the issue of whether the DNA data bank statute imposed cruel and unusual punishment turned upon the

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226. KAN. STAT. ANN. § 21-2511 (Supp. 1994).

227. 874 F. Supp. 1210 (D. Kan. 1995).

228. *Id.* at 1213. Plaintiffs also alleged that "their right to procedural due process ha[d] been violated by threats that upon refusal to comply with the blood draw required by the statute, an inmate w[ould] be summarily placed in restraints, subjected to the involuntary extraction of blood, and placed in segregation for an indefinite period." *Id.* at 1215-16. The court found no violation in procedural due process rights because "the bare threat of placement in segregation did not impair a protected liberty interest and [because], given the court's approval of the testing itself, a hearing could not benefit an inmate in the absence of a viable question of law or fact." *Id.* at 1216.

229. *Id.* at 1214 (citing *Schmerber v. California*, 384 U.S. 757, 771 (1966)).

230. *Id.*

231. 962 F.2d 302, 306-07 (4th Cir. 1992).

232. *Id.* at 306.

233. *Id.* at 307-08.

234. *Vanderlinden*, 874 F. Supp. at 1215.

235. *Id.* at 1215 (quoting *Dunn v. White*, 880 F.2d 1188, 1194 (10th Cir. 1989)).

236. *Id.*



finding of whether the statute imposed punishment.<sup>237</sup> The court recognized that the DNA data bank was established for law enforcement purposes<sup>238</sup> and, therefore, the court held that the statute was not penal.<sup>239</sup> Further, the court noted that the plaintiffs failed to show that any force used to enforce the statute was "malicious or grossly disproportionate to the refusal to comply with the statutory mandate."<sup>240</sup> Accordingly, the court held that the DNA data bank statute did not impose cruel and unusual punishment in violation of the Eighth Amendment.<sup>241</sup>

In addressing the plaintiffs' Ex Post Facto claim, the court noted that the Ex Post Facto Clause "applie[d] only to penal statutes which disadvantage the offender affected by them."<sup>242</sup> Because the court had previously held that the DNA data bank statute was not penal, it concluded that the statute did not violate the Ex Post Facto Clause.<sup>243</sup> Likewise, the court summarily rejected the plaintiffs' claim that the statute had to be invalidated as an unconstitutional Bill of Attainder<sup>244</sup> because the statute had already been found not to impose punishment.<sup>245</sup>

Finally, the court addressed the plaintiffs' sixth argument—that the statute denied persons convicted of certain crimes equal protection of the laws without possessing a compelling state interest.<sup>246</sup> The court chose to apply a strict scrutiny standard<sup>247</sup> to the DNA data bank statute because it involved the fundamental right of privacy.<sup>248</sup> In order to uphold a statute under strict scrutiny, a court must find a compelling governmental interest, and the statute must be narrowly tailored to achieve that interest.<sup>249</sup> The court noted that the purpose of the statute, to advance law enforcement, was "significant."<sup>250</sup>

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237. *Id.* at 1216.

238. *Id.* at 1210 (indicating the purpose of the statute is "to detect and deter commission of crimes by recidivists").

239. *Id.* at 1216.

240. *Id.*

241. *Id.*

242. *Collins v. Youngblood*, 497 U.S. 37, 41 (1990), *quoted in Vanderlinden v. State*, 874 F. Supp. 1210, 1216 (1995).

243. *Id.*

244. "A bill of attainder is 'a law that legislatively determines guilt and inflicts punishment upon an identifiable individual without provision of the protections of a jury trial.'" *Vanderlinden*, 847 F. Supp. at 1216-17 (quoting *Nixon v. Administrator*, 433 U.S. 425, 468 (1977)).

245. *Id.* at 1216.

246. *Id.*

247. "[S]trict scrutiny applies where a fundamental right, such as privacy, marriage, voting, or suspect classification . . . is implicated." *Id.* at 1217.

248. *Id.*

249. *Id.*; *see supra* note 156.

250. *Vanderlinden*, 874 F. Supp. at 1217.

Furthermore, the court found that the statute was narrowly drawn to achieve that purpose because the statute concentrated on the group of convicted individuals that was "most likely . . . to commit the type of crime in which DNA may be left."<sup>251</sup>

#### IV. MARYLAND'S DNA DATA BASE SYSTEM AND REPOSITORY—A CONSTITUTIONAL ANALYSIS

The Maryland General Assembly recently enacted legislation (the Act), which became effective October 1, 1994, that created a statewide DNA data base system and repository.<sup>252</sup> The statute provides, in pertinent part:

(a) *Definitions.* — (1) In this section the following words have the following meanings indicated.

...  
(7) "DNA sample" means a bodily fluid or tissue sample provided by any person convicted of a qualifying crime of violence or any body fluid or tissue sample submitted to the statewide DNA data base system for analysis pursuant to a criminal investigation.

(8) "Qualifying crime of violence" means:

(i) A violation of Article 27, § 35A of the Code that involves sexual abuse;

(ii) Rape in any degree; or

(iii) A sexual offense in the first, second, or third degree.

...  
(c) *Collection of DNA.* — . . . a person convicted of a qualifying crime of violence shall:

(1) Have a DNA sample collected upon intake to any prison or detention facility; or

(2) If not sentenced to a term of imprisonment, be ordered by the court to provide a DNA sample as a condition of sentence.

(d) *Retroactive collection.* — A person who has been convicted of a qualifying crime of violence [a sexual offense] prior to October 1, 1994 and who remains incarcerated on that date shall submit a DNA sample to the Department of Public Safety and Correctional Services.

(e) *Purpose of testing.* — (1) . . . DNA samples shall be tested for the following purposes:

(i) To analyze and type the genetic markers contained in or derived from DNA samples;

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251. *Id.*

252. MD. ANN. CODE art. 88B, § 12A (1995).

- (ii) In the furtherance of an official investigation into a criminal offense;
- (iii) To assist in the identification of human remains;
- (iv) To assist in the identification of missing persons; and
- (v) For research and administrative purposes, including
  1. Development of a population data base after personal identifying information is removed;
  2. Support of identification research and protocol development of forensic DNA analysis methods; and
  3. Quality control purposes.
- (2)(i) Only DNA records that directly relate to the identification of individuals shall be collected and stored.
- (ii) These records may not be used for any purposes other than those specified in this section.

. . . .<sup>253</sup>

As indicated by the cases in other jurisdictions, Maryland's DNA Data Base System and Repository legislation may be susceptible to a variety of constitutional challenges.<sup>254</sup>

253. *Id.*

254. In addition to the challenges discussed in the text of this Comment, Maryland's DNA data banking statute may be susceptible to challenges under (1) the Free Exercise Clause of the First Amendment and (2) the Fifth Amendment's privilege against self-incrimination. The success of these challenges, however, appear very unlikely.

*(1) First Amendment—Freedom of Religion*

The first determination that must be made when a statute is challenged under the Free Exercise Clause of the First Amendment is whether or not the statute is "neutral and of general applicability." *Ryncarz v. Eikenberry*, 824 F. Supp. 1493, 1502 (E.D. Wash. 1993) (referring to *Employment Div. Dept. of Human Resources v. Smith*, 494 U.S. 872 (1990)). If the statute is generally applied and neutral towards imposing a burden on religion, a compelling state interest is not required. *Id.* However, if it is not, the statute must first be evaluated according to several factors in order to be justified by a compelling state interest. *Id.*

The factors the court would then consider to determine if the burden is justified are: (1) whether the regulation has a logical connection with the legitimate governmental interests invoked to justify the regulation, (2) whether an alternative means exists for the inmate to exercise the constitutional right, (3) the impact that accommodations of the asserted right would have on other inmates, on prison personnel, and on allocation of prison resources, and (4) the absence of ready alternatives. *Id.* (citing *O'Lone v. Estate of Shabazz*, 482 U.S. 342, 350-53 (1987)). The statute then must be narrowly applied in order to promote that interest. *Id.* at 1502. Maryland's DNA data banking statute appears to be neutral and generally applied. Therefore, the courts would uphold Maryland's data banking statute.

*(2) Fifth Amendment—Privilege Against Self-Incrimination*

The Fifth Amendment protects an individual, in a criminal case, against

*A. The Fourth Amendment—Unreasonable Searches and Seizures*

The creation of Maryland's DNA data base system and repository raises the question whether or not collection of a "DNA sample"<sup>255</sup> from a convicted sex offender in anticipation that he will commit a future crime constitutes an unreasonable search and seizure that violates the convicted sex offender's Fourth Amendment rights. Thus, the first question to be determined in analyzing a constitutional challenge under the Fourth Amendment is whether a search or seizure is involved.<sup>256</sup> It is well settled that blood tests constitute searches of persons within the meaning of the Fourth Amendment.<sup>257</sup> Because

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self-incrimination. "No person shall be . . . compelled in any criminal case to be a witness against himself . . ." U.S. CONST. amend. V. The privilege against self-incrimination bars "compelling 'communications' or 'testimony,'" from the accused but permits compelling "real or physical evidence." *Schmerber v. California*, 384 U.S. 757, 764 (1966). The traditional form of fingerprinting does not violate the Fifth Amendment privilege of an accused. *Id.* Therefore, DNA fingerprinting should not violate the Fifth Amendment privilege of an accused either. The privilege of self-incrimination, however, also permits a person to refuse to answer questions which may incriminate him in *future* criminal proceedings. *Minnesota v. Murphy*, 465 U.S. 420, 426 (citing *Lefkowitz v. Turley*, 414 U.S. 70, 77 (1973)). Therefore, "[t]o the extent that DNA analysis would later be used as an investigative tool in connection with a crime not yet committed, it is questionable whether . . . the sample would tend to incriminate an inmate." 91 Tenn. Op. Att'y Gen. No. 29, 1991 WL 535093 (Tenn. A.G. Mar. 28, 1991). Maryland courts would most likely find that the collection, analysis, and storing of DNA samples under the Act would be noncommunicative in nature and, therefore, would not be protected by the Fifth Amendment's privilege against self-incrimination.

255. MD. ANN. CODE art. 88B, § 12A(a)(7) (1995). The statute defines a DNA sample as "a bodily fluid or tissue sample". *Id.* A blood sample will most likely be the most common specimen. However, the broad scope of the language used in the statute also allows for other bodily fluids or tissues, such as saliva or semen, to be collected.
256. *Skinner v. Railway Labor Executives' Ass'n*, 489 U.S. 602, 614 (1989); see also *City of Annapolis v. United Food and Commercial Workers*, 317 Md. 544, 551, 565 A.2d 672, 675 (1989) (discussing Fourth Amendment challenge to city's drug testing program for uniformed police and fire personnel). See generally 91 Tenn. Op. Att'y Gen. No. 29, 1991 WL 535093 (Tenn. A.G. Mar. 28, 1991) (analyzing the constitutionality of Tennessee's DNA Data Bank statute).
257. See, e.g., *Schmerber v. California*, 384 U.S. 757, 767 (1966) (taking of blood "plainly constitutes searches of 'persons,' . . . within the meaning of [the Fourth] Amendment"); *Skinner*, 489 U.S. at 616 (finding that "physical intrusions, penetrating beneath the skin, infringe an expectation of privacy that society is prepared to recognize as reasonable"); *People v. Wealer*, 636 N.E.2d 1129, 1132 (Ill. App. Ct. 1994) (indicating that the intrusion necessary to obtain a sample of saliva would be lower than the intrusion necessary for the extraction of blood).

the Fourth Amendment only protects against "unreasonable" searches and seizures, the next inquiry is whether or not the extraction of a DNA sample from a convicted sex offender in anticipation that he will commit future crimes is unreasonable.<sup>258</sup> A warrant issued upon probable cause is generally the measure of reasonableness, however, in its absence, application of a balancing test may determine whether or not a search is unreasonable.<sup>259</sup> The case law that addresses the Fourth Amendment implications of DNA data banks<sup>260</sup> indicates that three possible balancing tests may be applied in this situation: (1) weighing the general privacy rights of a person to be free from unjustified government intrusion against the government's "special needs beyond normal law enforcement,"<sup>261</sup> (2) weighing the limited privacy rights of convicted persons against the government's interest,<sup>262</sup> and (3) balancing the gravity of the intrusion upon personal privacy, utilizing more traditional principles underlying the Fourth Amendment, against the government's interest.<sup>263</sup> It is unclear which of the three balancing tests the Maryland courts would adopt.

While there is no clear definition as to what constitutes special needs beyond the normal needs of law enforcement, the State of Maryland may argue that establishing a DNA Data Bank will deter recidivist acts and, therefore, that the statute's purpose is not for normal law enforcement. The Maryland courts would likely then consider whether there is a substantial relationship between deterring recidivism and the Act. If such a relationship exists, the courts would weigh the state's interest against the general privacy rights of convicted sex offenders, the persons affected by the Act. In determining

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258. *Skinner*, 489 U.S. at 619; *United States v. Sharpe*, 470 U.S. 675, 682 (1985); *Schmerber*, 384 U.S. at 768; *United Food and Commercial Workers*, 317 Md. at 551, 565 A.2d at 675.

259. *Skinner*, 489 U.S. at 619; *Griffin v. Wisconsin*, 483 U.S. 868 (1987); *United Food and Commercial Workers*, 317 Md. at 551, 565 A.2d at 675.

260. *See, e.g., Rise v. Oregon*, 59 F.3d 1556, 1560-61 (9th Cir. 1995); *Jones v. Murray*, 962 F.2d 302, 305-08 (4th Cir. 1992) (Murnaghan, J., concurring); *Vanderlinden v. State*, 874 F. Supp. 1210, 1213-14 (D. Kan. 1995); *Sanders v. Coman*, 864 F. Supp. 496, 499 (E.D.N.C. 1994); *Jones v. Murray*, 763 F. Supp. 842, 844-48 (W.D. Va. 1991); *People v. Wealer*, 636 N.E.2d 1129, 1131-37 (Ill. App. Ct. 1994); *State v. Orozco*, 878 P.2d 432, 435-36 (Or. Ct. App. 1994) (en banc); *State v. Olivas*, 856 P.2d 1076, 1079-86 (Wash. 1993) (en banc) (Utter, J., concurring).

261. *See, e.g., Jones*, 763 F. Supp. at 844-46; *Olivas*, 856 P.2d at 1084-86.

262. *See, e.g., Jones*, 962 F.2d at 307; *Sanders*, 864 F. Supp. at 499; *Vanderlinden*, 874 F. Supp. at 1215.

263. *See, e.g., Rise*, 59 F.3d at 1558-61; *Jones*, 962 F.2d at 311-13 (Murnaghan, J., concurring); *Wealer*, 636 N.E.2d at 1135; *Orozco*, 878 P.2d at 435-36; *Olivas*, 856 P.2d at 1090-92 (Utter, J., concurring).

the convicted sex offenders' privacy rights, the courts would most likely rely upon the well-settled authority establishing: (1) that blood testing is a minimally intrusive search<sup>264</sup> and (2) that convicted persons possess diminished privacy rights generally<sup>265</sup> and possess no expectation of privacy in their identities.<sup>266</sup> While the outcome of the "special needs" balancing test depends upon the particular facts of the case, it is likely that the courts would find that the State of Maryland has a compelling interest in deterring recidivist acts and that the Act is substantially related to this goal. Therefore, as in cases from other states, this compelling interest would probably outweigh the minimal intrusion upon the convicted sex offender's otherwise diminished privacy right in identification.

The Court of Appeals of Maryland has indicated, however, that the "special needs" exception only applies in non-criminal cases.<sup>267</sup> Under provisions of the Act, DNA testing is performed as a result of a criminal conviction. Therefore, in the absence of a clear "administrative justification independent of a law enforcement purpose,"<sup>268</sup> the Maryland courts may be reluctant to extend the "special needs" exception to this statute, which applies to criminal cases.

If the Maryland courts determine that the Act does not fall within the scope of the "special needs" doctrine, then the courts may utilize the theory that convicted sex offenders have diminished privacy rights under the Act. Maryland courts recognize that "a convicted prisoner cannot avail himself of the full panoply of rights and privileges which attend ordinary citizenship. Nonetheless, a convicted prisoner is not wholly stripped of constitutional protections by reason of his conviction and incarceration."<sup>269</sup> Should the courts

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264. See *Schmerber v. California*, 384 U.S. 757, 771 (1966).

265. See *Griffin v. Wisconsin*, 483 U.S. 868, 880 (1987) (determining that probationers had a limited right to privacy against searches of their homes pursuant to a program to ensure rehabilitation and safety); *Hudson v. Palmer*, 468 U.S. 517, 530 (1984) (holding that an inmate had no expectation of privacy in his prison cell entitling him to Fourth Amendment protection against unreasonable searches); *Bell v. Wolfish*, 441 U.S. 520, 559-60 (1979) (holding that body cavity searches of pretrial detainees did not violate the Fourth Amendment).

266. *Jones*, 763 F. Supp. at 848; see *Davis v. Mississippi*, 394 U.S. 721, 727 (1969) (holding that "fingerprinting constitutes a less serious intrusion upon personal security than other types of police searches and detentions").

267. *City of Annapolis v. United Food and Commercial Workers*, 317 Md. 544, 551, 565 A.2d 672, 675 (1989) ("[E]xceptions to [the warrant requirement] are proper in non-criminal cases 'when special needs, beyond the normal need for law enforcement, make the warrant and probable cause requirements impracticable.'").

268. *People v. Wealer*, 636 N.E.2d 1129, 1135 (Ill. App. Ct. 1994).

269. *Secretary, Dep't of Public Safety and Correctional Servs. v. Allen*, 286 Md. 133, 137, 406 A.2d 104, 106 (1979); see also *Brashear v. State*, 90 Md. App.

find that the convicted sex offender possesses a limited privacy right under the Fourth Amendment, this interest would be balanced against the government's interest. Again, the courts would most likely determine that the government has a compelling interest in deterring recidivist acts that outweighs the convicted individual's reasonable expectation of privacy. Therefore, the statute would likely be upheld against a Fourth Amendment challenge.

Notwithstanding precedent in other jurisdictions for the first two balancing tests, Maryland may be unwilling to reduce the privacy rights of the convicted sex offender with regard to the Act. Should this occur, the Maryland courts are likely to adopt the third test, the more traditional Fourth Amendment balancing test.<sup>270</sup> Once again, it would be expected that the courts would determine that the State of Maryland has a compelling interest in deterring recidivist acts which would most likely outweigh the minimally intrusive blood extraction procedure.<sup>271</sup>

Maryland courts would probably reject the argument that the statute constitutes an unreasonable search and seizure and would probably uphold the Act against a Fourth Amendment challenge regardless of the balancing test applied.

#### *B. The Constitutional Right to Privacy*

A defendant may challenge the Act by alleging that the collection of a DNA sample violates his constitutional right to privacy. To this end, the defendant would have to prove that he has a legitimate expectation of privacy.<sup>272</sup> "As a general matter, lawful detention or imprisonment 'necessarily makes unavailable [to an inmate] many rights and privileges of the ordinary citizen.'" <sup>273</sup> Although the inmate's constitutional protections are limited, such protections are not wholly divested.<sup>274</sup> It is well established that a convicted person has a limited privacy right with respect to his or her identity<sup>275</sup> and against searches.<sup>276</sup>

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709, 603 A.2d 901 (1992) (recognizing that a prisoner has a limited expectation of privacy).

270. *See City of Annapolis v. United Food and Commercial Workers*, 317 Md. 544, 565 A.2d 672 (1989) (noting that Maryland has utilized the traditional Fourth Amendment balancing test in cases dealing with the chemical analysis of urine samples for drug testing).

271. *See Schmerber v. California*, 384 U.S. 757, 771 (1966) (discussing the minimal intrusion imposed by extracting blood).

272. *Jones v. Murray*, 763 F. Supp. 842, 849 (W.D. Va. 1991) (holding that "[t]o the extent . . . the DNA analysis reveals identification characteristics," the challenger failed to indicate a legitimate expectation of privacy).

273. *Thomas v. State*, 285 Md. 458, 463, 404 A.2d 257, 260 (1979) (quoting *Wolff v. McDonnell*, 418 U.S. 539, 555 (1974)).

274. *State v. Orozco*, 878 P.2d 432, 436-39 (Or. Ct. App. 1994) (Rossman, Edmonds, De Muniz, J.J., concurring).

275. *Id.* at 436.

276. *Brown v. Texas*, 443 U.S. 47, 50-51 (1979).

The Act states that “[o]nly DNA records that directly relate to the identification of individuals shall be collected and stored.”<sup>277</sup> If the courts were to consider DNA analysis as nothing more than an advanced form of traditional fingerprinting, which reveals no more than a person’s identity, then to the extent that convicted persons do not have a constitutional right of privacy with regard to their identities<sup>278</sup> and to the extent that they have diminished privacy rights from searches,<sup>279</sup> Maryland courts would probably hold that a legitimate expectation of privacy has not been established. Therefore, the Act would not violate a convicted individual’s constitutional right to privacy.

Relying on the science underlying DNA analysis, a defendant may argue that DNA fingerprinting is much more than an advanced form of the traditional fingerprint. DNA contains the genetic code for our most intimate characteristics. As a result, DNA fingerprinting may decipher our complete, personal genetic history. At the present time, “scientists around the world are working feverishly on a multibillion-dollar ‘Human Genome Project’ to fully decipher [the genetic] code.”<sup>280</sup> Once scientists have achieved this goal, DNA testing may be able to utilize probes which will detect, among other things, genetic disorders. At that point, it will not be true that DNA testing merely establishes an individual’s identity. Rather, it will expose for public view an individual’s entire genetic history.

Such concerns regarding future advances in the field of DNA analysis are appropriate considering that the Act provides for a repository for the DNA samples and does not indicate how long the samples will be maintained;<sup>281</sup> the samples may be retained indefinitely and tested at a later date utilizing state of the art techniques. The Fourth Circuit, however, has dismissed this line of argument and has stated: “This matter must be addressed at a later date, as it is a hypothetical concern at this time.”<sup>282</sup> In accordance with the Fourth Circuit, the Maryland courts would likely hold<sup>283</sup> that the capability of ascertaining one’s genetic history does not exist at the present time and, therefore, must be addressed at a later, more appropriate date.

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276. *Brown v. Texas*, 443 U.S. 47, 50-51 (1979).

277. MD. ANN. CODE art. 88B, § 12A(e)(2)(i) (1994).

278. *Brown*, 443 U.S. at 50-51; *Orozco*, 878 P.2d at 436.

279. *Brown*, 443 U.S. at 50-51; *Rise v. Oregon*, 59 F.3d 1556, 1559 (9th Cir. 1995).

280. Frank D. Roylance, *DNA Banks: They're a Boon for Police but Do They Violate Rights to Privacy*, BALT. EVE. SUN, Oct. 15, 1991, at 1D.

281. See MD. ANN. CODE art. 88B, § 12A.

282. *Jones v. Murray*, 763 F. Supp. 842, 848 (W.D. Va. 1991).

283. The United States District Court for the Western District of Virginia determined, at that point in time, that law enforcement officials could not “glean[] one[s] genetic history from a DNA sample.” *Id.* at 848 & n.15.



If and when the government can "glean one's genetic history from a DNA sample,"<sup>284</sup> the Maryland legislature may continue to avoid addressing a right to privacy challenge by, for example, limiting the types of probes which may be utilized in the DNA analysis and, thus, not allowing use of probes that identify genetic disorders. The legislature may also consider clearly defining the term "identification" within the Act to exclude the use of genetic disorders as a means of "identification." If the DNA testing procedures are narrowly tailored to prevent the disclosure of an individual's genetic history, then the Act will probably withstand future challenges on privacy grounds as well.

### C. *The Due Process Clause—Void for Vagueness*

A defendant challenging the Act may assert that the statute is void on the basis that the testing procedures are unconstitutionally vague. For example, a statute may be "stricken for vagueness if it fails to provide legally fixed standards and adequate guidelines for . . . [those] whose obligation it is to enforce, apply and administer the . . . laws."<sup>285</sup> The constitutionality of a statute under attack on the ground that it is unconstitutionally vague must be determined strictly on the basis of the statute's application to the particular facts at hand.<sup>286</sup>

Under this due process analysis, the defendant has the burden to establish that "the procedure used in drawing blood [is] unconstitutional and not . . . that the purpose for which [the] blood was drawn [is] unconstitutional."<sup>287</sup> The Act specifically indicates that the DNA sample shall be collected by an individual trained in such procedures.<sup>288</sup> The Supreme Court has stated that blood taken by a trained individual, such as a physician or a technician, involves minimal intrusion and, therefore, does not deny the defendant due process of law.<sup>289</sup> Similarly, it would appear that the Maryland courts would find that a DNA sample, which may be a blood specimen, that is collected by a trained individual would not violate a defendant's due process rights. Thus, Maryland courts are unlikely to find the testing procedures of the Act to be unconstitutionally vague.

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284. *Id.* at 848.

285. *Bowers v. Maryland*, 283 Md. 115, 121, 389 A.2d 341, 345 (1978).

286. *Id.* at 122, 389 A.2d at 346; *see United States v. National Dairy Prods. Corp.*, 372 U.S. 29, 32-33, 36 (1963) (stating that the statute's constitutionality should be trusted "as applied to the conduct with which the defendant is charged").

287. *State v. Olivas*, 856 P.2d 1076, 1086 (Wash. 1993) (en banc).

288. MD. ANN. CODE art. 88B, § 12A(h).

289. *Schmerber v. California*, 384 U.S. 757, 759-60 (1966); *Breithaupt v. Abram*, 352 U.S. 432, 436-37 (1957); *see also In re Z.P.B.*, 474 N.W.2d 651, 654 (Minn. Ct. App. 1991) (citing *Schmerber v. California*, 384 U.S. 757 (1966)).

*D. The Fifth and Fourteenth Amendments—Equal Protection of the Law*

The Act requires “a person convicted of a qualifying crime of violence”<sup>290</sup> to submit a DNA sample for DNA analysis. In short, the statute indicates that a “qualifying crime of violence” is a sexual offense.<sup>291</sup> Because the Act requires DNA testing for sexual offenders and not, for example, for inmates convicted of non-sexual offenses, the Act could become vulnerable to a challenge that it violates a sex offender’s right to equal protection of the law under the Fifth and Fourteenth Amendments.

Under an equal protection challenge, a court must apply the appropriate standard of scrutiny.<sup>292</sup> The Supreme Court of Washington, in *State v. Olivas*, held that under a similar DNA data bank statute the rational basis test applied because neither a suspect nor a semi-suspect class was involved.<sup>293</sup> Under the rational basis test, a court must determine whether or not “[t]here is a rational relationship between the interest of the government in law enforcement and the application of the statute to [the] class of persons.”<sup>294</sup>

One legitimate interest of the Act is “the furtherance of an official investigation into a criminal offense.”<sup>295</sup> In addition, Maryland courts may consider the higher probability of obtaining a comparative DNA sample from a sexual crime scene versus other crime scenes, thus making DNA testing a much more useful investigative tool in cases involving sexual offenses. Accordingly, it is likely that the courts will find that performing DNA analysis on convicted sex offenders, but not on other convicted persons, is rationally related to the State of Maryland’s legitimate interest of deterring recidivist acts and furthering criminal investigations.

The Federal District Court for the District of Kansas, in *Vanderlinden v. State*,<sup>296</sup> however, held that because privacy rights were implicated, the strict scrutiny test applied.<sup>297</sup> In order to uphold a

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290. MD. ANN. CODE art. 88B, § 12A(a)(8) & (c).

291. *Id.* § 12A(a)(8).

292. *See supra* notes 156-58 and accompanying text.

293. *State v. Olivas*, 856 P.2d 1076, 1087 (Wash. 1993) (en banc); *see also* Gilbert v. Peters, Nos. 93 C 20012, 92 C 20354, 1994 U.S. Dist. LEXIS 9215 (N.D. Ill. June 28, 1994).

294. *Gilbert*, Nos. 93 C 20012, 92 C 20354, 1994 U.S. Dist. LEXIS 9215, at \*\*24-25 (N.D. Ill. June 28, 1994); *Olivas*, 856 P.2d at 1087; *see also* Rinaldi v. Yeager, 384 U.S. 305, 309 (1966) (indicating that the Equal Protection Clause requires that the distinctions drawn bear some relevance to the purpose for which the classification is made); *see also* U.S. Retirement Bd. v. Fritz, 449 U.S. 166, 174 (1980).

295. MD. ANN. CODE art. 88B, § 12A(e)(i).

296. 874 F. Supp. 1210, 1217 (D. Kan. 1995).

297. *Id.*

statute under strict scrutiny, a court must find a compelling governmental interest, and the statute must be narrowly tailored to achieve that interest.<sup>298</sup> A court may find that “the furtherance of an official investigation into a criminal offense”<sup>299</sup> is a compelling governmental interest. Also, there is a “relationship between the type of crimes committed by [those individuals who are required by the Act to submit a blood sample] and the likelihood of recovering DNA at the scene of a crime committed by a recidivist.”<sup>300</sup> Therefore, even if the court utilized the more stringent, strict scrutiny standard, the Act would likely not be deemed to violate the Equal Protection Clause.

### *E. The Ex Post Facto Clause—Article I of the Constitution*

The Ex Post Facto Clause protects defendants from retrospective legislation with a purposeful punitive effect. Legislation that has a purposeful punitive effect is any legislation which: “[1] punishes as a crime an act previously committed, which was innocent when done; [2] makes more burdensome the punishment for a crime, after its commission, or [3] deprives one charged with crime of any defense available according to law at the time when the act was committed. . . .”<sup>301</sup> Legislation possessing any one of these three characteristics violates the Ex Post Facto Clause.

Maryland’s DNA data bank and repository statute requires that “[a] person who has been convicted of a qualifying crime of violence prior to October 1, 1994 and who remains incarcerated on that date shall submit a DNA sample . . . .”<sup>302</sup> As a result of this retroactive collection, it is possible that a defendant may claim that the Act violates the Ex Post Facto Clause.

Other jurisdictions that have ruled on this issue have found that the collection of samples for DNA testing is not penal and, thus, cannot “itself, run[] afoul of the Ex Post Facto Clause.”<sup>303</sup> Nonetheless, prison officials can impose disciplinary measures for failure to submit a sample without violating the Ex Post Facto Clause.<sup>304</sup> If Maryland is in accord with other jurisdictions, then Maryland courts

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298. *Id.*; see *U.S. Retirement Bd. v. Fritz*, 449 U.S. 166 (1980).

299. MD. ANN. CODE art. 88B, § 12A(e)(i).

300. *Vanderlinden*, 874 F. Supp. at 1217.

301. *Bezell v. Ohio*, 269 U.S. 167, 169 (1925)).

302. MD. ANN. CODE art. 88B, § 12A(d).

303. *Jones v. Murray*, 962 F.2d 302, 309 (4th Cir. 1992); *Gilbert v. Peters*, Nos. 93 C 20012, 92 C 20354, 1994 U.S. Dist. LEXIS 9215, at \*\*28-29 (June 28, 1994) (quoting *Jones v. Murray*, 962 F.2d 302, 309 (4th Cir. 1992)).

304. *Jones*, 962 F.2d at 309; *Gilbert*, Nos. 93 C 20012, 92 C 20354, 1994 U.S. Dist. LEXIS 9215, at \*\*28-29 (June 28, 1994) (citing *Jones v. Murray*, 962 F.2d 302, 309 (4th Cir. 1992)); *Ewell v. Murray*, 11 F.3d 482, 484 (4th Cir. 1993).

will probably conclude that the Act is not penal in nature and that it, therefore, does not violate the Ex Post Facto Clause.

Thus far, the only successful challenge against any DNA data banking statute on Ex Post Facto grounds occurred in *Jones v. Murray*.<sup>305</sup> In *Jones*, the Fourth Circuit held that Virginia's DNA data bank statute violated the Ex Post Facto Clause to the extent that the Virginia statute could be enforced to modify mandatory parole.<sup>306</sup> Maryland's statute (the Act), however, does not contain the same type of language that caused a portion of Virginia's statute to violate the Ex Post Facto Clause. In fact, the Act does not even establish a deadline by which the sample must be provided.<sup>307</sup> Thus, it does not appear that Maryland courts would consider the Act to violate the Ex Post Facto Clause.

#### F. *The Eighth Amendment—Cruel and Unusual Punishment*

DNA testing would be considered cruel and unusual punishment, under the Eighth Amendment, if it involved "the unnecessary wanton infliction of pain"<sup>308</sup> and if it was "grossly out of proportion to the severity of the crime."<sup>309</sup> The United States Supreme Court, in *Schmerber v. California*,<sup>310</sup> stated that blood testing "involves virtually no risk, trauma, or pain."<sup>311</sup> Furthermore, the "collection of a human biological specimen is a routine, safe procedure which does not appear to involve the wanton infliction of pain."<sup>312</sup> Therefore, Maryland courts would probably decide that the Act does not violate the Eighth Amendment's Cruel and Unusual Punishment Clause.

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305. *Jones*, 962 F.2d at 309-10.

306. *Id.* at 310 (invalidating the portion of the statute that "suggests that '[n]otwithstanding [the mandatory release on parole requirement], an inmate's release can be delayed until he provides a blood sample'").

307. A district court in Illinois held that a DNA data banking statute that required the sample to be submitted "prior to discharge, parole, or release," presumably closer to violating the Ex Post Facto Clause than Maryland's statute, could be interpreted to prevent prison officials from holding noncomplying inmates beyond the term of their sentences. *Gilbert v. Peters*, Nos. 93 C 20012, 92 C 20354, 1994 U.S. Dist. LEXIS 9215, at \*31 (June 28, 1994).

308. 91 Tenn. Op. Att'y Gen. No. 29, 1991 WL 535093 (Tenn. A.G. Mar. 28, 1991).

309. *Id.*; see *Coker v. Georgia*, 433 U.S. 584, 592 (1977) (recognizing that "[t]he Eighth Amendment bars not only those punishments that are 'barbaric' but also those that are 'excessive' in relation to the crime committed").

310. 384 U.S. 757 (1966).

311. *Id.* at 771; see *Jones v. Murray*, 763 F. Supp. 842, 847 (W.D. Va. 1991) (citing *Schmerber v. California*, 384 U.S. 757, 771 (1966)).

312. 91 Tenn. Op. Att'y Gen. No. 29, 1991 WL 535093 (Tenn. A.G. Mar. 28, 1991).

## V. CONCLUSION

DNA fingerprinting has revolutionized the nation's criminal justice system. The creation of DNA data banks will enhance and expedite criminal investigations and will provide a substantial deterrent against sexual offenses. Maryland's General Assembly should be commended for its recognition of DNA analysis and for its acceptance of this emerging technology.

As long as DNA analysis remains no more than an advanced identification system, the risk that it will violate an individual's constitutional rights remains slight. However, Maryland lawmakers must continue to monitor this ever-changing technology in order to prevent substantial violations of privacy in the future. If improvements in the science of DNA analysis should, in the future, enable the state to determine an individual's genetic history, the legislature will have to limit the analysis solely to identification characteristics. In view of the current state of the science, however, DNA data banking statutes provide tremendous law enforcement benefits.

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