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Remedying Wrongful Convictions Through DNA Testing: Expanding Post-Conviction Litigants’ Access to DNA Database Searches to Prove Innocence

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REMEDYING WRONGFUL CONVICTIONS THROUGH DNA TESTING: EXPANDING POST-CONViction LITIGANTS’ ACCESS TO DNA DATABASE SEARCHES TO PROVE INNOCENCE

Abstract: Forensic science is used as evidence in criminal cases regularly. Recently, however, scientists have criticized several commonly used forensic methods that are unreliable, scientifically invalid, and have contributed to wrongful convictions. In contrast, DNA testing, which is reliable and valid, is a powerful resource for exonerating wrongfully convicted individuals. Congress and all fifty states have enacted statutes providing access to post-conviction DNA testing. Only nine states, however, have enacted statutes granting post-conviction litigants access to another important resource—law enforcement DNA database searches. Even though Congress amended the federal post-conviction DNA testing statute to provide access to DNA database searches in 2016, only applicants incarcerated for federal offenses are eligible for relief under this statute. This Note argues that, to remedy wrongful convictions, all state legislatures should amend post-conviction DNA testing statutes to provide access to DNA database searches. Alternatively, Congress should amend the federal post-conviction DNA testing statute to provide post-conviction litigants wrongly convicted of state offenses with access to DNA database searches.

INTRODUCTION

On the morning of August 13, 1986, 31-year-old Christine Morton was found murdered in her bed in her home in Austin, Texas.1 Her attacker had used a wooden weapon to beat her to death while she was sleeping.2 Investigators suspected that Christine’s husband, 32-year-old Michael Morton, was her attacker, even though he did not have a criminal record or a history of vio-


2 Know the Cases: Michael Morton, supra note 1; Michael Morton, TEX. MONTHLY, https://www.texasmonthly.com/topics/michael-morton [https://perma.cc/MUT5-YG2S]. The attack happened sometime after 5:30am, when Christine’s husband, Michael Morton, left their house to go to his job as a supermarket manager. See Know the Cases: Michael Morton, supra note 1. Their three-year-old son, Eric, was home and witnessed his mother’s murder. Id.
lence. On February 17, 1987, a jury convicted Morton for his wife’s murder, and he received a life sentence. It was not until twenty-four years later, in 2011, that Morton finally obtained post-conviction DNA testing and a DNA database search, which proved his innocence.

Before Morton’s trial, the prosecution had discovered three pieces of evidence that pointed toward Morton’s innocence. The prosecution, however, did not turn over any of this evidence to the defense at trial. First, the Mortons’ three-year-old son, Eric, who witnessed his mother’s murder, described the crime scene and murder to his grandmother in detail, telling her, “Daddy was not home” when the murder happened, and the murderer was a “monster” with a “big mustache,” not his father. Second, the Mortons’ neighbors told police that, several times, a man driving a green van parked near the Mortons’ house and then went into the woods. Third, Christine’s credit card went missing, and police found it in a jewelry store in San Antonio, Texas.

3 Know the Cases: Michael Morton, supra note 1; Michael Morton, supra note 2. On the evening of August 12, 1986, Morton, Christine, and their three-year-old son, Eric, went out to dinner at a restaurant to celebrate Morton’s birthday. Profile of Michael Morton, supra note 1. When they returned home that night, Christine declined sex with her husband. See Know the Cases: Michael Morton, supra note 1. When Morton left for work at 5:30am the next morning, he left a note for Christine on the counter in their bathroom. Id. In the note, Morton told Christine that he was upset that she had not wanted to be intimate with him, and he signed the note with “I love you.” Id. Based on the note, the prosecution theorized that Morton murdered his wife because she had declined to be intimate on his birthday. Id.

4 Know the Cases: Michael Morton, supra note 1.

5 Id. Throughout those twenty-four years, Morton always maintained his innocence. Michael Morton, supra note 2.

6 Know the Cases: Michael Morton, supra note 1.

7 Id. The trial judge ordered the prosecution to turn over all of the chief investigator’s reports, but none of the reports that the prosecution turned over to the defense contained this evidence. Id. During their post-conviction investigation, Morton’s attorneys filed a Public Information Act request and obtained the documents that the prosecution had withheld at trial. Id. The Texas Supreme Court ordered a Court of Inquiry to determine whether the prosecutor in Morton’s case, Ken Anderson, had committed misconduct. Id. The Court of Inquiry concluded that Anderson concealed exculpatory evidence and charged him with criminal contempt and evidence tampering. Id.


9 Know the Cases: Michael Morton, supra note 1.

10 Id. A San Antonio police officer was prepared to identify the woman who tried to use the credit card at the jewelry store, but the prosecution did not tell the defense about either the credit card or the officer’s identification. Id.
The police also had in their possession before Morton’s trial a fourth piece of evidence that pointed toward Morton’s innocence, but they did not understand its significance at that time.11 On the day after Christine’s murder, her brother, John Kirkpatrick, found a blue, blood-stained bandana at a construction site approximately 100 yards from the Mortons’ home.12 Kirkpatrick gave the bloody bandana to the police, but they did not investigate it further.13 This bloody bandana would exonerate Morton twenty-four years later.14

At trial, the prosecution’s theory was that Morton beat his wife to death because of her refusal to have sex with him the night before the murder.15 The prosecution did not present any witnesses or physical evidence to support its theory.16 The jury convicted Morton despite the lack of evidence.17

After several years of Morton requesting DNA testing, in 2010, an appellate court finally granted him post-conviction testing on both the bloody bandana and hair found on it.18 In 2011, a laboratory found two profiles in the DNA from the bandana—Christine Morton’s DNA profile and the profile of an unknown male.19 Thus, DNA testing excluded Morton as the source of the DNA on the bandana, but the actual perpetrator was still unknown.20 Morton soon obtained a DNA database search, which identified convicted felon Mark Alan Norwood as the source of the male DNA on the bandana.21 The defense

11 See Colloff, supra note 1 (explaining that, after John Kirkpatrick turned over the bandana to the police, the police did not investigate it further, either because they did not understand its significance or because they ignored it); Know the Cases: Michael Morton, supra note 1 (stating that the police recovered the bandana prior to Morton’s trial, but the bandana was not tested until Morton requested post-conviction DNA testing).
12 Colloff, supra note 1; Know the Cases: Michael Morton, supra note 1.
13 Colloff, supra note 1.
14 Kreag, supra note 8, at 807; Know the Cases: Michael Morton, supra note 1.
15 Know the Cases: Michael Morton, supra note 1.
16 Id.
17 Id. Morton appealed his conviction, but the appellate court denied his appeal. Profile of Michael Morton, supra note 1.
18 Profile of Michael Morton, supra note 1. In 1990, Morton requested post-conviction DNA testing on a semen stain on the bedsheet from his and Christine’s bed, but the testing identified Morton as the source of the DNA. Id. Morton requested DNA testing on the bloody bandana and other evidence in 2005. Michael Morton, supra note 2; Profile of Michael Morton, supra note 1. The court granted DNA testing for some other items of evidence from the crime scene but not the bloody bandana. Profile of Michael Morton, supra note 1. Some of that DNA testing was inconclusive, and none of it could rule out Morton as the source of DNA collected from his and Christine’s bed. Id. In 2010, Morton appealed the denial of his request for DNA testing on the bloody bandana, and the appellate court ordered the testing. Id.
19 Know the Cases: Michael Morton, supra note 1. The DNA testing indicated that the hair on the bandana belonged to Christine and that Christine’s blood was on the bandana. Profile of Michael Morton, supra note 1.
20 Kreag, supra note 8, at 806.
21 Id. at 807. Norwood was living in Texas when Christine was murdered in August 1986. Know the Cases: Michael Morton, supra note 1. He had been convicted of a felony in California, and he had a criminal record in Texas as well. Id. Law enforcement can collect convicted offenders’ DNA profiles and
and prosecution teams investigated Norwood, and they established not only that he murdered Christine Morton, but also that he murdered another woman, Debra Masters Baker. Morton was in prison at the time of Baker’s murder, meaning that, while Morton was wrongfully imprisoned for a crime that he did not commit, the actual perpetrator was free and committed another horrendous crime. As a direct result of the DNA testing and DNA database search requested by Morton, he was able to pursue a claim of actual innocence in the Texas Court of Criminal Appeals. The district attorney agreed to release Morton on bond while his claim was pending, and on October 4, 2011, Morton was released from prison after serving nearly twenty-five years for a crime he did not commit. In a case similar to Morton’s, except for his access to the DNA database, another wrongfully-convicted man was denied access to the database and served another seven years before being exonerated.

enter them into DNA databases, so Norwood’s DNA profile may have been in the DNA database because it was entered in connection with one of his prior felony convictions. See FBI, NATIONAL DNA INDEX SYSTEM (NDIS) OPERATIONAL PROCEDURES MANUAL 27 (2017) [hereinafter NDIS MANUAL], https://www.fbi.gov/file-repository/ndis-procedures-manual-ver4-approved-04272016.pdf [https://perma.cc/J322-TD97] (stating that the National DNA Index System (“NDIS”) contains the DNA profiles of convicted offenders as well as other types of DNA profiles); Know the Cases: Michael Morton, supra note 1 (stating that Norwood was a convicted felon).

22 Know the Cases: Michael Morton, supra note 1. Baker was murdered in Travis County, Texas two years after Christine’s murder. Id. Like Christine, Baker was beaten to death in her bed. Id. The investigation by Morton’s defense team and the Travis County District Attorney’s Office found that Norwood’s pubic hair had been recovered from the scene of Baker’s murder. Profile of Michael Morton, supra note 1. Norwood was charged with Christine’s murder in November 2011, and, in March 2013, he was convicted and sentenced to life in prison. Id. In September 2016, Norwood was convicted of Baker’s murder and given a second life sentence, to be served consecutively with his life sentence for Christine’s murder. Brittany Glas, Mark Norwood Found Guilty of 2nd Murder, Sentenced to Life, KXAN (Sept. 23, 2016), https://www.kxan.com/news/local/austin/closing-arguments-jury-deliberation-expected-friday-in-norwood-trial-day-9/995007001 [https://perma.cc/ZY2T-MUV3]. See Know the Cases: Michael Morton, supra note 1 (stating that Baker was murdered while Morton was in prison). Had Norwood been identified as the true murder and convicted instead of Morton in 1987, Norwood would not have had the opportunity to murder Baker. See id.

23 See Know the Cases: Rickey Dale Wyatt, supra note 1 (stating that Wyatt was in prison). Had Norwood been identified as the true murder and convicted instead of Morton in 1987, Norwood would not have had the opportunity to murder Baker. See id.


25 Id.; Know the Cases: Michael Morton, supra note 1. For Morton’s memoir describing his wrongful conviction and exoneration, see generally MICHAEL MORTON, GETTING LIFE: AN INNOCENT MAN’S 25-YEAR JOURNEY FROM PRISON TO PEACE: A MEMOIR (2015).

26 Kreag, supra note 8, at 807–08, 807 n.7 (stating that the Texas DNA database administrator denied Rickey Dale Wyatt’s request to access the DNA database in March 2005); id. at 808 n.9 (stating that Wyatt’s conviction was vacated and he was released from prison in May 2012). See generally Know the Cases: Rickey Dale Wyatt, INNOCENCE PROJECT, https://www.innocenceproject.org/cases/rickey-dale-wyatt [https://perma.cc/S9EK-CFK5] (describing the case of Rickey Dale Wyatt); Profile of Rickey Dale Wyatt, NAT’L REGISTRY OF EXONERATIONS, https://www.law.umich.edu/special/exoneration/Pages/casedetail.aspx?caseid=3973 [https://perma.cc/W5BV-KYXV] (describing the case of Rickey Dale Wyatt). In 1981, Wyatt was convicted of aggravated rape and sentenced to ninety-nine years in prison. Wyatt v. State, No. 05-04-01345-CR, 2005 WL 729960, at *1 (Tex. Ct. App. Mar. 31, 2005); see also Kreag, supra note 8, at 807; Know the Cases: Rickey Dale Wyatt, supra. A trial court
Between 1989 and the end of 2018, in the United States, 2,360 wrongfully convicted individuals were exonerated after spending an average of 8.7 years in prison for crimes they did not commit.\(^{27}\) Several factors cause wrongful convictions: mistaken eyewitness identifications; false confessions; false informant testimony; police and prosecutorial misconduct; ineffective assistance of defense counsel; and flawed forensic science.\(^{28}\) Flawed forensic science, in particular, has played a role in nearly one-quarter of all recorded exonerations.

Denied Wyatt’s motion for post-conviction DNA testing in 2004, and an appellate court affirmed the denial on appeal. *Wyatt*, 2005 WL 729960, at *1, *4. Eventually, Wyatt obtained DNA testing, but the DNA evidence from the victim’s sexual assault kit had degraded over time, and the laboratory could only identify a partial DNA profile. Kreag, *supra* note 8, at 807. The partial DNA profile, however, excluded Wyatt as a source of the DNA in the sexual assault kit. *Id.* Nevertheless, the Texas DNA database administrator denied Wyatt’s request for a DNA database search because the partial profile did not satisfy the requirements for a search. *Id.* at 807–08. Without the DNA database search, Wyatt could not identify the actual perpetrator of the crime he was wrongfully convicted of. *Id.* at 808. Wyatt’s conviction was not overturned until 2012, after he had already served thirty-one years. *See* *Ex parte* Wyatt, No. AP-76797, 2012 WL 1647004 (Tex. Crim. App. May 9, 2012) (overturning Wyatt’s conviction); *see also* Kreag, *supra* note 8, at 808 n.9 (stating that Wyatt’s conviction was overturned). The district attorney re-investigated Wyatt’s case and dismissed the original indictment in 2014 based on his innocence. Kreag, *supra* note 8, at 808 n.9; see Robert Wilonsky, *Dallas Man Who Served 31 Years in Prison for a Rape He Didn’t Commit Finally Declared Innocent*, DALL. MORNING NEWS CRIME BLOG (Dec. 2014), https://crimeblog.dallasnews.com/2014/12/dallas-man-who-served-31-years-in-prison-for-a-rape-he-didnt-commit-finally-declared-innocent.html [https://perma.cc/LA6U-72Z6] (reporting on Wyatt’s release from prison). Had Wyatt been permitted to search the DNA database, he might have been exonerated earlier. *See* Kreag, *supra* note 8, at 808 n.9 (explaining that progress in Wyatt’s case was delayed because he could not search the DNA database).

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\(^{27}\) *Exonerations in the United States*, NAT’L REGISTRY OF EXONERATIONS, https://www.law.umich.edu/special/exoneration/Pages/Exonerations-in-the-United-States-Map.aspx [https://perma.cc/XBN2-8R6H?type=image]. Wrongful conviction is defined as “[a] conviction of a person for a crime that he or she did not commit” or “[b]roadly, a conviction that has been overturned or vacated by an appellate court.” *Conviction*, BLACK’S LAW DICTIONARY (10th ed. 2014). In this Note, the term “wrongful conviction” refers to the first definition. *Id.* To exonerate is “[t]o clear of all blame; to officially declare (a person) to be free of guilt.” *Exonerate*, BLACK’S LAW DICTIONARY (10th ed. 2014). Exculpate means “[t]o be free from blame or accusation; esp., to prove not guilty.” *Exculpate*, BLACK’S LAW DICTIONARY (10th ed. 2014).

wrongful convictions. Since the development of DNA testing in the mid-1980s, it has become an important resource for exonerating wrongfully convicted individuals. For some exonerees, like Morton, however, exculpatory DNA testing results alone have not been sufficient to establish innocence. Morton was not exonerated until a search of a law enforcement DNA database identified the actual perpetrator of the crime.

All fifty states and Congress have enacted post-conviction DNA testing statutes. Only nine state statutes and the federal statute, however, contain provisions allowing post-conviction litigants access to DNA database searches. Without statutory access, post-conviction litigants’ access is left to the discretion of the law enforcement agencies that control the DNA databases. Although some agencies may agree to a DNA database search, there is no guarantee that all post-conviction litigants will be granted a search like Morton was granted.

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30 See Kreag, supra note 8, at 812 (explaining that DNA testing helps solve crimes); Michael P. Luongo, Post-Conviction Due Process Right to Access DNA Evidence: District Attorney’s Office v. Osborne, 129 S. Ct. 2308 (2009), 29 TEMP. J. SCI. TECH. & ENVTL. L. 127, 130, 131 (2010) (explaining the value of DNA testing in criminal cases). See generally GARRETT, supra note 28 (examining the wrongful conviction cases of the first 250 DNA exonerees). There have been 350 DNA exonerations in the United States to date. DNA Exonerations Database, CONVICTING THE INNOCENT, https://www.convictingtheinnocent.com [https://perma.cc/57WZ-HGNT].

31 See Kreag, supra note 8, at 806–07 (explaining that, after he obtained exculpatory post-conviction DNA testing, Michael Morton still needed access to search a DNA database in order to identify the actual perpetrator and prove his innocence).

32 Id.


34 18 U.S.C. § 3600(e); Kerry Abrams & Brandon L. Garrett, DNA and Distrust, 91 NOTRE DAME L. REV. 757, 779 (2015); Kreag, supra note 8, at 808 & n.13; Bronner, supra note 33. The nine states are Colorado, Georgia, Illinois, Maryland, Mississippi, New York, North Carolina, Ohio, and Texas. See COLO. REV. STAT. § 18-1-412(9) (2017); GA. CODE ANN. § 5-5-41(9) (2017); 725 ILL. COMP. STAT. ANN. 5/116-5 (West 2017); MD. CODE ANN., CRIM. PROC. § 8-201(d)(2) (West 2017); MISS. CODE ANN. § 99-39-11(10) (2017); N.Y. CRIM. PROC. LAW § 440.30.1(a) (McKinney 2017); N.C. GEN. STAT. § 15A-269 (2017); OHIO REV. CODE ANN. § 2953.74(E) (West 2017); TEX. CODE CRIM. PROC. ANN. art. 64.035 (West 2017); see also Kreag, supra note 8, at 808 n.13; Bronner, supra note 33.

35 Kreag, supra note 8, at 808–09.

36 See id. (explaining that, in the absence of statutes granting post-conviction litigants access to DNA database searches, law enforcement agencies have discretion to decide whether to grant access). For example, law enforcement refused a DNA database search in Rickey Dale Wyatt’s case. See id. at 807–08 (explaining the Texas DNA database administrator’s denial of Wyatt’s request for a DNA
This Note examines the role of flawed forensic science in wrongful convictions and the importance of access to post-conviction DNA testing and DNA database searches to exonerate wrongfully convicted individuals. Part I of this Note provides an overview of flawed forensic science, the development of DNA testing, and the creation of DNA databases. Part II explains the importance of DNA database searches following post-conviction DNA testing to prove innocence. Part II also analyzes state and federal statutes granting defendants access to DNA database searches. Finally, Part III argues that all state legislatures should amend their post-conviction DNA testing statutes to provide post-conviction litigants with access to DNA database searches. Alternatively, Part III argues that Congress should amend the federal post-conviction DNA testing statute to provide applicants wrongly convicted of state offenses with access to DNA database searches under the federal statute.

I. THE ROLE OF FORENSIC SCIENCE IN WRONGFUL CONVICTIONS

Forensic science can help solve crimes, but it has also contributed to the wrongful convictions of hundreds of innocent individuals. The forensic fea-
ture-comparison methods, in particular, are unreliable and scientifically invalid.44 DNA testing, however, is scientifically valid and reliable, and DNA testing has exonerated 350 wrongfully convicted individuals.45 Law enforcement agencies have created DNA databases containing DNA profiles collected from known individuals and unsolved crimes.46 Although a DNA database search can help prove a wrongfully convicted individual’s innocence by identifying the actual perpetrator of the crime, not all post-conviction litigants have access to search these databases.47

This Part provides background information on the role of forensic science in wrongful convictions.48 Section A discusses flawed forensic science methods, which contributed to wrongful conviction in nearly one quarter of all exonerations in the United States since 1989.49 Section B discusses the development of DNA testing and the creation of searchable DNA databases—both effective resources forremedying wrongful convictions.50

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44 NAT’L RESEARCH COUNCIL OF THE NAT’L ACADS., STRENGTHENING FORENSIC SCIENCE IN THE UNITED STATES: A PATH FORWARD 7–8 (2009) [hereinafter NAS REPORT]. The President’s Council of Advisors on Science and Technology (“PCAST”) defines the forensic “feature-comparison” methods as methods involving looking for physical similarities between pieces of crime-scene evidence and samples collected from suspects. EXECUTIVE OFFICE OF THE PRESIDENT: PRESIDENT’S COUNCIL OF ADVISORS ON SCIENCE AND TECHNOLOGY, REPORT TO THE PRESIDENT: FORENSIC SCIENCE IN CRIMINAL COURTS: ENSURING SCIENTIFIC VALIDITY OF FEATURE-COMPARISON METHODS 1 (2016) [hereinafter PCAST REPORT], https://obamawhitehouse.archives.gov/sites/default/files/microsites/ostp/PCAST/pcast_forensic_science_report_final.pdf [https://perma.cc/7TY8-7A2F]. Examples of forensic feature-comparison methods include comparisons of “hair, latent fingerprints, firearms and spent ammunition, toolmarks and bitemarks, shoeprints and tiretracks, and handwriting.” Id. The forensic feature-comparison methods are unreliable because their results are neither “consistent [n]or accurate.” See GARRETT, supra note 28, at 86 (defining unreliability and characterizing feature-comparison methods as unreliable).

45 NAS REPORT, supra note 44, at 7; DNA Exonerations Database, supra note 30; see infra notes 72–81 and accompanying text (describing DNA testing methods).

46 Kreag, supra note 8, at 812, 815. There is a federal DNA database as well as state and local DNA databases. Id. at 812–13; see infra notes 82–117 and accompanying text (describing DNA databases).

47 Kreag, supra note 8, at 808–09; see, e.g., supra note 26 (describing the case of Rickey Dale Wyatt, who was wrongfully convicted of aggravated rape and obtained exculpatory DNA testing results but was not allowed access to search any DNA databases).

48 See infra notes 51–117 and accompanying text.

49 See infra notes 51–66 and accompanying text.

50 See infra notes 67–117 and accompanying text.
Forensic science is the application of scientific techniques to help solve crimes.51 Some forensic methods, such as serology (blood type testing) and DNA testing, are reliable and scientifically valid and thus are helpful in answering legal questions.52 In 2009, however, the National Academy of Sciences (“NAS”) released a report criticizing other commonly used forensic methods that have not been proven scientifically valid.53 Courts have admitted testimony based on unreliable forensic methods in some cases because the standards for admitting scientific evidence construct an analysis that is flexible, gives discretion to trial judges, and has failed to exclude this evidence.54

51 See GARRETT, supra note 28, at 85 (defining forensic science as “the use of science to help answer legal questions”); Michael J. Saks & David L. Faigman, Failed Forensics: How Forensic Science Lost Its Way and How It Might Yet Find It, 4 ANN. REV. L. & SOC. SCI. 149, 152 (2008) (stating that “forensic science is routinely defined as ‘the application of science to problems of law’”). The legal definition of forensic science is:

A broad range of evidence-related disciplines, some laboratory-based (as with nuclear and mitochondrial-DNA analysis, toxicology, and drug analysis), others based on interpretation of observed patterns (as with fingerprints, writing samples, tool marks, bite marks, and specimens), and still others based on a combination of experiential and scientific analysis (as with explosive and fire-debris analysis, blood-spatter analysis).

52 See GARRETT, supra note 28, at 86, 94 (describing serology as a reliable method); NAS REPORT, supra note 44, at 7–8, 40–41 (describing DNA testing as the only consistently accurate and reliable forensic method); Tibbits, supra note 43, at 361 (stating that DNA testing and serology have “sound scientific bases”). A forensic method is unreliable if its results are neither consistent nor accurate. GARRETT, supra note 28, at 86. Serology is also referred to as ABO blood-typing. Id. Each person has one of the four blood types—either A, B, AB, or O—and a person’s blood type remains the same throughout his or her entire life. Id. In a serological analysis, a forensic examiner performs a chemical test to determine the blood type of a sample, and the results are objective, not based on the examiner’s subjective opinion. Id. When a forensic examiner compares a suspect’s blood type to the blood type of a bodily fluid from a crime scene, such as blood or semen, the examiner concludes that the suspect is either included or excluded as a possible contributor to the sample. Id. Using databases, the examiner can determine the frequency of each blood type in the population and thus determine what percentage of the population shares the suspect’s blood type. Id. If the suspect shares the same blood type as the crime-scene sample, not only is the suspect included as a possible contributor, but the percentage of the world’s population that shares the suspect’s blood type is also included as a possible contributor. Id.

53 NAS REPORT, supra note 44, at 111–82. In contrast to serology, the forensic feature-comparison methods, such as hair microscopy, do not produce consistent and accurate results because they are based on forensic examiners’ personal opinions, and examiners’ opinions vary. GARRETT, supra note 28, at 86; see supra note 52 (describing serology, which is reliable).

54 NAS REPORT, supra note 44, at 85–111; see FED. R. EVID. 702; Daubert v. Merrell Dow Pharm, Inc., 509 U.S. 579, 589, 592–94 (1993). The admission of unreliable forensic evidence has contributed to several wrongful convictions. See GARRETT, supra note 28, at 85–101 (examining flawed forensic evidence admitted in wrongful conviction cases); % Exonerations by Contributing Factor, supra note 29 (showing that flawed forensic science was present in nearly one-quarter of all known wrongful convictions in the United States since 1989). The standard for admitting scientific expert witness testimony is Federal Rule of Evidence 702, which the United States Supreme Court
As of December 20, 2018, there have been 2,360 exonerations in the United States since 1989.\textsuperscript{55} In each case, an innocent defendant was wrongfully convicted for a crime that he or she did not commit.\textsuperscript{56} Bad forensic evidence was a contributing factor in 552 (23\%) of these cases.\textsuperscript{57} The incidence of flawed forensic science is even higher for DNA exonerations, which usually are rape and rape-murder cases, where biological evidence is common.\textsuperscript{58}

In 2005, in the Science, State, Justice, Commerce, and Related Agencies Appropriations Act of 2006, Congress gave the NAS permission to conduct a forensic science study previously recommended in a Senate Report.\textsuperscript{59} In the

\textsuperscript{55} \textit{Exonerations in the United States}, supra note 27. The National Registry of Exonerations (“Registry”), founded in 2012, provides information about all United States exonerations since 1989 with the goal of preventing future wrongful convictions. \textsc{National Registry of Exonerations: Our Mission}, https://www.law.umich.edu/special/exoneration/Pages/mission.aspx [https://perma.cc/24CE-MW9C]. The Newkirk Center for Science & Society at University of California Irvine, the University of Michigan Law School, and Michigan State University College of Law maintain the Registry. \textit{Id.} The Registry defines exoneration as “occur[ring] when a person who has been convicted of a crime is officially cleared based on new evidence of innocence.” \textsc{Glossary, National Registry of Exonerations} https://www.law.umich.edu/special/exoneration/Pages/glossary.aspx [https://perma.cc/QDV9-ZJH4]. Specifically, any of the following qualifies as exoneration: (1) a government official or agency declares the person “factually innocent”; or (2) a court or government official removes the conviction by (i) granting a full pardon, (ii) acquitting the person of the charges, or (iii) dismissing the charges. \textit{Id.}

\textsuperscript{56} \textsc{Glossary, supra} note 55. Of the 2,360 exonerees included in the Registry as of December 20, 2018, 2,147 (91\%) are male, and 213 (9\%) are female. \textit{Exonerations in the United States}, supra note 27. On average, each exoneree lost 8.7 years of his or her life to wrongful conviction. \textit{Id.}

\textsuperscript{57} \textit{\% Exonerations by Contributing Factor}, supra note 29. Other causes of wrongful conviction include mistaken eyewitness identification, false confessions, informant testimony, police and prosecutorial misconduct, and ineffective assistance of counsel. \textit{See generally Garrett, supra} note 28 (examining the causes of wrongful conviction, including flawed forensic science, in the first 250 DNA exonerations). In some cases, more than one factor contributed to a wrongful conviction. \textit{See \% Exonerations by Contributing Factor, supra} note 29 (showing that the sum of the percentages of cases involving each factor add up to greater than 100\%, because some cases involved more than one factor).

\textsuperscript{58} \textit{See Garrett, supra} note 28, at 5 (explaining that, out of the first 250 DNA exonerations, the most common crimes were rape, rape-murder, and murder, whereas other crimes, like robbery, were much less common); \textit{id.} at 12 (stating that DNA is not present at the scenes of most crimes but is more commonly present at the scenes of rapes); \textit{id.} at 263 (stating that DNA testing is typically performed in rape cases, and DNA exonerations are usually rape and rape-murder cases); \textit{id.} at 271 (explaining that DNA testing is not possible in cases involving crimes like robbery because robbers rarely leave biological material at the crime scene).

fall of 2006, pursuant to that congressional authorization, the NAS established the Committee on Identifying the Needs of the Forensic Science Community to conduct the study. In 2009, the NAS released its report—Strengthening Forensic Science in the United States: A Path Forward ("NAS Report")—summarizing its findings on the current state of forensic science in the United States and providing thirteen recommendations for improvements necessary to achieve best practices. Regarding the current state of forensic science, the

(1) assess the present and future resource needs of the forensic science community, to include State and local crime labs, medical examiners, and coroners; (2) make recommendations for maximizing the use of forensic technologies and techniques to solve crimes, investigate deaths, and protect the public; (3) identify potential scientific advances that may assist law enforcement in using forensic technologies and techniques to protect the public; (4) make recommendations for programs that will increase the number of qualified forensic scientists and medical examiners available to work in public crime laboratories; (5) disseminate best practices and guidelines concerning the collection and analysis of forensic evidence to help ensure quality and consistency in the use of forensic technologies and techniques to solve crimes, investigate deaths, and protect the public; (6) examine the role of the forensic community in the homeland security mission; (7) examine interoperability of Automated Fingerprint Information Systems ["AFIS"]; and (8) examine additional issues pertaining to forensic science as determined by the Committee.

Id.; see NAS REPORT, supra note 44, at 1–2.

60 NAS REPORT, supra note 44, at 2. The Committee on Identifying the Needs of the Forensic Science Community was composed of members representing the forensic science community, the legal community, and other scientific disciplines, such as biology, chemistry, and statistics. Id. at v. The committee held eight two-day meetings during 2008, at which the committee’s members listened to expert testimony on a variety of forensic science issues and deliberated. Id. at 2–4. The committee’s goal was to provide recommendations to serve as a roadmap for future forensic science progress. Id. at xix.

61 See generally NAS REPORT, supra note 44. In its report, the NAS first recommended that Congress establish the National Institute of Forensic Science ("NIFS") “to support and oversee the forensic science disciplines,” and then made twelve recommendations related to the proposed NIFS’s work. Id. at 19–33. The NAS noted that a broad range of disciplines fall within the term “forensic science,” and it adopted the National Institute of Justice’s ("NIJ") categorization of forensic science disciplines: “(1) general toxicology; (2) firearms/toolmarks; (3) questioned documents; (4) trace evidence; (5) controlled substances; (6) biological/serology screening (including DNA analysis); (7) fire debris/arson analysis; (8) impression evidence; (9) blood pattern analysis; (10) crime scene investigation; (11) medicolegal death investigation; and (12) digital evidence.” Id. at 38; Status and Needs of Forensic Science Service Providers: A Report to Congress, NAT'L INST. OF JUSTICE 3 (2004), https://www.ncjrs.gov/pdffiles1/nij/213420.pdf [https://perma.cc/JME7-FE3P]. The forensic science disciplines generally can be divided into two categories—laboratory-based disciplines and pattern-interpretation-based disciplines. NAS REPORT, supra note 44, at 38. The laboratory-based disciplines include nuclear DNA testing, mitochondrial DNA testing, toxicology, and drug analysis, whereas the pattern-interpretation-based disciplines include the analysis of fingerprints, writing samples, tool marks, and bite marks, as well as hair microscopy. Id.; see GARRETT, supra note 28, at 95 (describing
NAS Report concluded that DNA testing is the only forensic method that produces consistent results and has a high degree of certainty.62 In contrast, other common forensic methods, including the forensic feature-comparison methods, are not supported by sufficiently rigorous scientific studies, and thus they are unreliable and scientifically invalid.63

The term “forensic feature-comparison method” refers to any forensic method where an examiner compares the features of two items of forensic evidence next to each other, often under a microscope, and reaches a subjective conclusion, deciding whether the items are consistent or inconsistent with each other, entirely based on the examiner’s opinion.64 Examples of forensic feature-comparison methods include hair microscopy, fiber comparison, bite mark comparison, fingerprint comparison, tool mark comparison, bullet casing comparison, shoe print comparison, and voice comparison.65 Because these flawed forensic methods are unreliable, they have produced inaccurate results in some cases and contributed to wrongful convictions.66

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63 See NAS REPORT, supra note 44, at 7 (stating that DNA testing is the only forensic method that has been shown to be consistently accurate and reliable); Findley, supra note 62 (stating that the NAS concluded in its report that most forensic methods, except DNA testing, are “fundamentally unscientific”).

64 GARRETT, supra note 28, at 85–86, 95. For instance, in hair microscopy, an analyst might compare under a microscope a pubic hair collected from the scene of a rape to a reference sample of the suspected perpetrator’s pubic hair. See id. (describing hair microscopy).

65 Id. at 85, 90. Each of these methods involves comparing two items side-by-side. Id. at 85.

66 Id. at 90 (explaining that many exonerees’ convictions were “based on forensic methods that were unreliable”); see % Exonerations by Contributing Factor, supra note 29 (showing that flawed forensic science was present in nearly one-quarter of all known wrongful convictions in the United States since 1989). See generally GARRETT, supra note 28, at 84–117 (examining flawed forensic science in 250 DNA exonerations). In response to the exonerations of three men convicted based on flawed hair microscopy, the FBI began reviewing cases where its analysts testified about hair microscopy. FBI Testimony on Microscopic Hair Analysis Contained Errors in at Least 90 Percent of Cases in Ongoing Review, FBI (Apr. 20, 2015), https://www.fbi.gov/news/pressrel/press-releases/fbi-testimony-on-microscopic-hair-analysis-contained-errors-in-at-least-90-percent-of-cases-in-ongoing-review [https://perma.cc/QWA6-H5QG]. The FBI began its review in 2012, and in 2015, the agency admitted that its analysts’ testimony about microscopic hair comparison was flawed. FBI Testimony on Microscopic Hair Analysis Contained Errors in at Least 90 Percent of Cases in Ongoing Review, supra; Spencer S. Hsu, FBI Admits Flaws in Hair Analysis over Decades, WASH. POST (Apr. 18, 2015), https://www.washingtonpost.com/local/crime/fbi-overstated-forensic-hair-matches-in-nearly-all-criminal-trials-for-decades/2015/04/18/39e8d8e6-e515-11e4-b510-962f6fabc310_story.html [https://perma.cc/UT5S-KH3T]; Spencer S. Hsu, Justice Dept., FBI to Review Use of Forensic Evidence in Thousands of Cases, WASH. POST (July 10, 2012), https://www.washingtonpost.com/
B. The Development of DNA Testing and DNA Databases

In contrast to the forensic feature-comparison methods, DNA testing is scientifically valid and reliable. Unlike the forensic feature-comparison methods, which have contributed to wrongful convictions, DNA testing has remedied 350 wrongful convictions since 1989. Not only have scientists improved DNA testing techniques over time, but law enforcement agencies have created DNA databases to expand the ability of DNA testing to identify perpetrators and solve crimes. These databases contain the DNA profiles of known offenders as well as profiles collected from the scenes of unsolved crimes. The databases have search functions, allowing law enforcement to compare new DNA profiles against the DNA profiles stored in the databases.

1. DNA Testing

The current standard for DNA profiling is a DNA testing technique called polymerase chain reaction (“PCR”). Scientists developed PCR in the mid-1980s, and in 1989, PCR-based DNA testing was used for the first time to exonerate a wrongfully convicted person, Gary Dotson. The PCR technique can...
be used on small and degraded DNA samples. This sensitivity is an important advantage over prior DNA testing techniques, especially in the post-conviction DNA testing context, where degraded samples are common.

Two types of PCR-based DNA typing are performed today—Short Tandem Repeat (“STR”) and mitochondrial DNA (“mtDNA”) typing. Each technique evaluates a different type of DNA—the STR technique evaluates DNA from the cell’s nucleus, whereas mtDNA testing evaluates DNA from the cell’s mitochondria. The STR method can be used to obtain a DNA profile from

Post-Conviction DNA Testing Is Not Yet Over: An Analysis of the Eight Remaining “Holdout States” and Suggestions for Strategies to Bring Vital Relief to the Wrongfully Convicted, 98 J. CRIM. L. & CRIMINOLOGY 329, 335 (2007); Tibbits, supra note 43, at 363. In July 1979, Gary Dotson was wrongfully convicted of rape and kidnapping in Cook County, Illinois and sentenced to twenty-five to fifty years in prison. Profile of Gary Dotson, NAT’L REGISTRY OF EXONERATIONS, https://www.law.umich.edu/special/exoneration/Pages/casedetail.aspx?caseid=3186 [https://perma.cc/E6AZ-F2SA]. The victim was 16-year-old Cathleen Crowell. Id. On the night of July 9, 1977, Crowell told a police officer that she had been raped, and he took her to a hospital for an examination. Id. Crowell had superficial cuts on her stomach, and there was semen on her underwear. Id. Police showed Crowell a book of mugshot photographs, and she identified 24-year-old Dotson’s photograph. Id. At trial, the only evidence against Dotson was Crowell’s identification of him and forensic testimony. Id. The forensic testimony was incorrect, but the defense did not challenge it, and the judge did not question it. Id. Several years later, in 1982, Crowell (now Cathleen Crowell Webb) and her husband, David Webb, moved to Jaffrey, New Hampshire. Id. In New Hampshire, in 1985, Webb told her pastor that she had invented the rape allegation against Dotson, and she felt guilty. Id. The truth was that she never had been raped. Id. In fact, she invented the rape story because she had sex with her boyfriend and feared that she would become pregnant. Id. She wanted to use the rape story to cover up a possible pregnancy by her boyfriend. Id. She did not, however, become pregnant by her boyfriend. Id. When Webb’s attorney found out that Webb had recanted, he contacted the prosecutors, but they claimed that Webb was lying. Id. In 1987, a new attorney took on Dotson’s case and asked Illinois Governor James A. Thompson to order DNA testing. Id. In 1988, DNA testing excluded Dotson as a source of the DNA in the semen stain on Webb’s underwear, and DNA testing positively included Webb’s former boyfriend as the source of the DNA. Id. On August 14, 1989, the prosecution joined Dotson’s motion to vacate his conviction. Id. On January 9, 2003, Dotson was granted a pardon based on innocence. Id.
nearly all types of biological samples. The mtDNA testing method is useful to analyze evidence that is too degraded for STR analysis, because mitochondrial DNA is more stable than nuclear DNA. MtDNA testing is sometimes used on hair shafts. Not only is PCR-based DNA profiling commonly used today, but also, most importantly, unlike the forensic feature-comparison methods, PCR is scientifically valid and reliable.

2. DNA Databases

In 1990, not long after scientists invented DNA testing, the Federal Bureau of Investigation (FBI) began creating and piloting the Combined DNA Index System (“CODIS”), which today supports a national network of DNA databases. Four years later, in 1994, Congress passed the DNA Identification Act (“DNA Act”), allowing the FBI to create a national DNA database. Under the DNA Act, the national DNA database can contain the known-offender DNA profiles of convicted offenders and unknown-DNA profiles obtained

See KREEGER & WEISS, supra note 67, at 7 (“Nuclear DNA is found in every cell and tissue of the body, except for red blood cells.”). A variation of STR testing, called “Y-STR” testing tests nuclear DNA on the Y-chromosome only. See DOJ PREDICTIONS, supra note 72, at 19 (describing Y-STR testing). Although the STR technique can be used to evaluate both male and female DNA profiles, Y-STR testing is only used for male profiles because it analyzes the Y chromosome, which is only present in men. Id. Because each man inherits his Y chromosome from his father, Y-STR testing can also trace male ancestry. Id. at 19.

See DOJ PREDICTIONS, supra note 72, at 18; Luongo, supra note 30, at 131.

See NAS REPORT, supra note 44, at 7 (concluding that DNA testing is the only forensic method that has been scientifically proven to be consistently accurate and reliable).

“CODIS” refers to the FBI’s program and software that support DNA databases. Frequently Asked Questions on CODIS and NDIS, FBI, https://www.fbi.gov/services/laboratory/biometric-analysis/codis/codis-and-ndis-fact-sheet [https://perma.cc/WZK2-8MA9]. Sometimes, the term “CODIS” is also used to refer collectively to all of the DNA databases that participate in the FBI’s program. See id. (defining CODIS). During the pilot program in 1990, only fourteen state and local law enforcement laboratories participated in the program. Combined DNA Index System (CODIS), supra. Today, more than 190 law enforcement agencies participate in the FBI’s DNA database program, and on the international level, more than fifty countries use the CODIS software for their DNA databases. Id.

42 U.S.C. § 14132 (1994); Kreag, supra note 8, at 812. The DNA Act is a subsection of the Violent Crime Control and Law Enforcement Act of 1992. See Kreag, supra note 8, at 813. As of September 1, 2017, the DNA Act has been moved to 34 U.S.C. § 12592. See 34 U.S.C.A. § 12592 (West 2017). The official title of the DNA Act is “Index to facilitate law enforcement exchange of DNA identification information.” Id.; see also Kreag, supra note 8, at 813.
from crime scene evidence as well as other types of data. Congress intended for the DNA Act to help law enforcement identify criminal suspects and thus solve and prosecute crimes. In 2002, in United States v. Reynard, the United States District Court for the Southern District of California noted that Congress also intended for the DNA database to make the criminal justice system more effective by reducing the possibility of law enforcement wrongly holding innocent individuals.

Consistent with these goals, law enforcement can search DNA databases whenever needed, such as during an investigation to try to identify a perpetrator whose DNA was collected from a crime scene. Even though one of its goals is avoiding the detention of innocent individuals, the DNA Act does not provide either pre-trial defendants or post-conviction litigants access to DNA database searches.

Pursuant to the DNA Act, the FBI established the National DNA Index System (“NDIS”) in October 1998, and it continues to be used today. NDIS is a

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84 34 U.S.C. § 12592; see also Kreag, supra note 8, at 812. The DNA Act authorizes the FBI’s DNA database to include the following: (1) DNA profiles of convicted offenders, individuals charged with crimes in indictments or informations, and other individuals whose DNA samples were collected legally; (2) DNA profiles obtained from crime scenes; (3) DNA profiles collected from unidentified human remains; and (4) DNA profiles that relatives of missing persons volunteer. 34 U.S.C. § 12592(a)(1)–(4). Indictments and informations are two types of charging instruments, or “formal legal documents by which a person can be officially charged with a crime.” Charging Instrument, BLACK’S LAW DICTIONARY (10th ed. 2014). An indictment is “[t]he formal written accusation of a crime, made by a grand jury and presented to a court for prosecution against the accused person.” Indictment, BLACK’S LAW DICTIONARY (10th ed. 2014). An information is “[a] formal criminal charge made by a prosecutor without a grand-jury indictment.” Information, BLACK’S LAW DICTIONARY (10th ed. 2014).


86 United States v. Reynard, 220 F. Supp. 2d 1142, 1161 (2002) (stating that Congress intended for the DNA database to “increase the efficacy of the criminal justice system by ‘eliminat[ing] the prospect that innocent individuals w[ill] be wrongly held for crimes that they did not commit’”) (quoting 146 CONG. REC. H8572-01, at H8575); Kreag, supra note 8, at 813 n.32.

87 See Kreag, supra note 8, at 816 (stating that “the quintessential goal” of DNA databases is “to help law enforcement solve cases by linking DNA profiles from known individuals to DNA profiles from unsolved crimes”).

88 See NDIS MANUAL, supra note 21, at 32 (stating that the Federal DNA Act does not give defendants permission to search DNA databases); David H. Kaye, Trawling DNA Databases for Partial Matches: What Is the FBI Afraid Of?, 19 CORNELL J.L. & PUB. POL’Y 145, 167 (2009) (stating that the DNA Identification Act of 1994 does not give a defendant access to DNA profiles unrelated to his or her case); Kreag, supra note 8, at 814 (stating that the DNA Identification Act does not give defendants authorization to search DNA databases themselves).

national DNA database that is part of CODIS, and it includes DNA profiles contributed not only by federal forensic laboratories, but also state and local forensic laboratories as well. The federal government, all fifty states, the District of Columbia, Puerto Rico, and the U.S. Army Criminal Investigation Laboratory all contribute to NDIS. Additionally, local and state law enforcement agencies also operate their own DNA databases independent from the FBI’s NDIS. Less is known about these databases, because, unlike NDIS, their operational regulations are not available to the public. All of the databases, however, are maintained by law enforcement agencies, and post-conviction litigants can search the databases only if a database administrator, a court, or a statute provides access.

3. Searching the National DNA Index System

NDIS contains both known-offender DNA profiles from convicted offenders and unknown-DNA profiles from unsolved crimes. Law enforcement agencies enter DNA profiles from crime scenes into the database as they are collected, and, on a weekly basis, NDIS automatically compares these crime-scene DNA profiles to the known-offender and unknown-DNA profiles stored in the database. Law enforcement agencies can also perform two types of search: comparing crime-scene DNA profiles against DNA profiles from known offenders and from other crime-scene profiles. The weekly searches have helped law enforcement agencies solve several unsolved crimes. 

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90 Frequently Asked Questions on CODIS and NDIS, supra note 82.

91 Id. To participate in NDIS, laboratories must meet several requirements, including being considered a “criminal justice agency,” being accredited in DNA testing, and complying with the federal record expungement requirements in § 12592(d). 34 U.S.C.A. § 12592 (West 2017); NDIS MANUAL, supra note 21, at 12–14. By meeting the requirements and participating in NDIS, a laboratory gains the benefits of a sublicense to use the CODIS software and the ability to upload DNA profiles to NDIS. Id. at 14–15.

92 Kreag, supra note 8, at 812–13.


94 Kreag, supra note 8, at 807 n.2, 808–09.

95 NDIS MANUAL, supra note 21, at 27; see Kreag, supra note 8, at 815–16 (explaining that a search of NDIS can compare a crime-scene DNA profile against DNA profiles from known offenders and from other crime-scenes).

96 See NDIS MANUAL, supra note 21, at 49, 50 (describing NDIS searches); Kreag, supra note 8, at 815–16 (describing NDIS searches). Comparing crime-scene DNA profiles to other crime-scene DNA profiles can identify serial offenders, even though the offenders’ identities are unknown. See NDIS MANUAL, supra note 21, at 54 (explaining that two crime-scene DNA profiles might match each other, and that this is called a “Forensic Candidate Match”); Kreag, supra note 8, at 815 (stating that NDIS can identify serial offenders by comparing DNA profiles collected from crime scenes). The weekly searches have helped law enforcement agencies solve several unsolved crimes. Kreag, supra note 8, at 815; see, e.g., Colin Moynihan, Cold Case DNA Unit Links Rikers Inmate to ’86 Murder, N.Y. Times, July 7, 2011, at A19, https://www.nytimes.com/2011/07/07/nyregion/ny-cold-case-unit-links-dna-to-86-murder.html [https://perma.cc/XA83-XWDJ]; see also Janon Fisher, Man Sentenced to Max—26 Years After Harlem Slaying, N.Y. Daily News (July 30, 2012), https://www.nydailynews.com/new-york/man-sentenced-max-26-years-harlem-slaying-article-1.1125142 [https://perma.cc/3XLQ-AR4H].
searches to try to identify the perpetrators of unsolved cases. First, law enforcement agencies can perform a known-offender DNA profile search. In this search, the law enforcement agency has the DNA profile of a known person of interest, and the agency performs a search to compare the individual’s profile against all of the crime-scene DNA profiles in the database. If the person’s profile matches a crime-scene profile, law enforcement can link this person to that unsolved crime.

Second, law enforcement agencies can perform a crime-scene DNA profile search. In this search, the law enforcement agency has a profile that was collected from a crime scene, and the agency does not know the identity of the individual who is the source of that DNA. In this search, the law enforcement agency compares the crime-scene profile to all known-offender and crime-scene profiles in the database. If the crime-scene DNA profile matches a known offender’s DNA profile, then law enforcement can link that individual to the crime. If the crime-scene DNA profile matches another crime-scene DNA profile, then law enforcement can link the two crimes and potentially identify a serial offender. This type of search is also useful post-conviction. If post-conviction DNA testing identifies a crime-scene DNA profile, and the wrongfully convicted defendant is excluded as the source of that DNA, then a crime-scene profile search could identify the actual perpetrator.

To perform either of these two types of searches, a law enforcement agency can choose one of two methods—adding the DNA profile to the database or

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97 Kreag, supra note 8, at 815–16; see NDIS MANUAL, supra note 21, at 52, 54 (explaining that NDIS can compare crime-scene DNA profiles against either known-offender profiles, which can produce an “Offender Candidate Match,” or against other crime-scene profiles, which can produce a “Forensic Candidate Match”).

98 Kreag, supra note 8, at 815; see NDIS MANUAL, supra note 21, at 52.

99 Kreag, supra note 8, at 815–16; see NDIS MANUAL, supra note 21, at 52.

100 See Kreag, supra note 8, at 816 (explaining that comparing known-offender DNA profiles against crime-scene profiles can solve previously unsolved crimes); NDIS MANUAL, supra note 21, at 52.

101 Kreag, supra note 8, at 816; see NDIS MANUAL, supra note 21, at 54.

102 Kreag, supra note 8, at 816; see NDIS MANUAL, supra note 21, at 54.

103 Kreag, supra note 8, at 816; see NDIS MANUAL, supra note 21, at 54.

104 See Kreag, supra note 8, at 816 (stating that “law enforcement’s goal is to find potential perpetrators in unsolved cases”); NDIS MANUAL, supra note 21, at 54.

105 See Kreag, supra note 8, at 816 & n.52. If the search of a crime-scene DNA profile does not link the crime-scene DNA profile to a known-offender DNA profile, then familial searching, or partial-match searching, can also be performed. Id. at 816 n.53. In a familial search, law enforcement tries to identify a known-offender profile that is similar enough to the crime-scene DNA profile that the unknown individual associated with the crime-scene profile must be a close relative of the person associated with the known profile. Id. See generally Murphy, supra note 93.

106 See Kreag, supra note 8, at 815, 816 (explaining that post-conviction litigants utilize both types of searches to establish innocence).

107 See id. (describing known-offender and crime-scene DNA profile searches).
conducting a keyboard search. A law enforcement agency can add a DNA profile to the database as part of its search only if the profile is sufficiently complete. Thus, some partial, crime-scene DNA profiles might not qualify for addition to the database. Once a profile is added to the database, it will be compared to others in the database during each weekly search. Thus, even if the initial search does not link the crime-scene DNA profile to a known-offender profile or another crime-scene profile, it could be linked to a new DNA profile added in the future.

In the second method, a keyboard search, a DNA database administrator manually enters a crime-scene DNA profile without adding it to the database. The crime-scene profile is compared against known-offender profiles in the database just once. Because the crime-scene profile is not added to the database in a keyboard search, it will not be included in the weekly searches and compared against DNA profiles added to the database in the future. Keyboard searches are used to search only partial profiles, not complete profiles. Partial profiles often result from degraded DNA, and are thus likely when working with old samples.

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108 Id.; see NDIS MANUAL, supra note 21, at 37, 50 (describing the submission of DNA profiles to NDIS and manual keyboard searches).
109 Kreag, supra note 8, at 816; see NDIS MANUAL, supra note 21, at 36–48 (explaining the criteria that DNA profiles must meet to be added to NDIS).
110 See NDIS MANUAL, supra note 21, at 36–38 (listing the criteria for DNA profiles to be submitted to NDIS); Kreag, supra note 8, at 816 (explaining that a DNA profile can be permanently added to NDIS only if it is “sufficiently complete,” and that keyboard searches are used for partial DNA profiles).
111 NDIS MANUAL, supra note 21, at 50; Kreag, supra note 8, at 816.
112 See NDIS MANUAL, supra note 21, at 50 (describing the weekly searches of NDIS); Kreag, supra note 8, at 816 (describing the weekly searches of NDIS).
113 NDIS MANUAL, supra note 21, at 50; Kreag, supra note 8, at 816.
114 Kreag, supra note 8, at 816; see NDIS MANUAL, supra note 21, at 50 (describing keyboard searches).
115 See NDIS MANUAL, supra note 21, at 50 (describing keyboard searches); Kreag, supra note 8, at 816 (describing keyboard searches).
116 Kreag, supra note 8, at 816; see NDIS MANUAL, supra note 21, at 50–51 (describing keyboard searches). Partial profiles are often obtained from degraded samples or samples that only contained a small amount of DNA. Kreag, supra note 8, at 816. According to the FBI’s NDIS Manual, keyboard searches are allowed only in exceptional circumstances and must be approved by the FBI. NDIS MANUAL, supra note 21, at 50–51; Kreag, supra note 8, at 816 n.57. There are two exceptional circumstances in which keyboard searches are allowed. NDIS MANUAL, supra note 21, at 50–51. First, a keyboard search is allowed where urgent situations dictate that a DNA profile be searched before it is uploaded to NDIS. Id. at 50. For example, the possibility that a serial offender might commit another crime before the next scheduled search qualifies as an urgent situation. Id. at 51. Second, a keyboard search is allowed where a DNA profile from a serious violent crime does not meet the criteria to be uploaded to NDIS but does meet a specified lesser standard involving the statistical rarity of the partial profile. Id.
117 See Kreag, supra note 8, at 816 (stating that DNA degrades over time); Luongo, supra note 30, at 130 (stating that samples from crime scenes are often degraded).
II. CURRENT STATE AND FEDERAL STATUTES PROVIDING ACCESS TO POST-CONVICTIO

All fifty states and Congress have enacted post-conviction DNA testing statutes. Only nine states, however, have enacted statutes granting post-conviction litigants access to DNA database searches. In 2016, Congress also amended the federal post-conviction DNA testing statute to include a DNA database search provision. The federal statute, however, is available only to applicants incarcerated for federal convictions.

This Part analyzes post-conviction litigants’ access to DNA database searches under state and federal statutes. Section A describes the history of post-conviction DNA testing statutes as well as elements common to many of these statutes. Section B explains why some post-conviction litigants require access to DNA database searches to prove their innocence. Section B also analyzes state statutes that grant post-conviction litigants access to DNA database searches. Section C analyzes the federal post-conviction DNA testing statute, which provides access to DNA database searches for applicants with federal convictions and a limited number of applicants with state convictions.

118 18 U.S.C. § 3600(e) (Supp. IV 2016); Kreag, supra note 8, at 808; Bronner, supra note 33. For a complete list of all fifty state post-conviction DNA testing statutes, see Post-Conviction Relief Through DNA Testing, 0030 SURVEYS 21 (West 2017).

119 Abrams & Garrett, supra note 34, at 779; Kreag, supra note 8, at 808 n.13; Bronner, supra note 33. The nine states are Colorado, Georgia, Illinois, Maryland, Mississippi, New York, North Carolina, Ohio, and Texas. COLO. REV. STAT. § 18-1-412(9) (2017); GA. CODE ANN. § 5-5-41(9) (2017); 725 ILL. COMP. STAT. ANN. 5/116-5 (West 2017); MD. CODE ANN., CRIM. PROC. § 8-201(d)(2) (West 2017); MISS. CODE ANN. § 99-39-11(10) (2017); N.Y. CRIM. PROC. LAW § 440.30.1-a(e) (McKinney 2017); N.C. GEN. STAT. § 15A-269 (2017); OHIO REV. CODE ANN. § 2953.74(E) (West 2017); TEX. CODE CRIM. PROC. ANN. art. 64.035 (West 2017); Kreag, supra note 8, at 808 n.13; Bronner, supra note 33.

120 Justice for All Act of 2004, Pub. L. No. 108-405, Title IV, § 411(a)(1), 118 Stat. 2260 (2004). Compare 18 U.S.C. § 3600(e)(1)(B)(i)–(ii) (requiring that, any time DNA testing ordered under the statute excludes the post-conviction litigant as a source of the DNA, the federal district court must order law enforcement to upload the crime-scene DNA profile to NDIS to be searched against the DNA profiles in the database), with id. § 3600(e) (lacking a DNA database search provision and, instead, only requiring that the results of DNA testing conducted according to the statute be reported to the court, applicant, and government, and that the government submit the post-conviction litigant’s DNA profile to NDIS).

121 18 U.S.C. § 3600(a)(1) (defining the class of post-conviction litigants eligible for relief under the statute—called “applicants”—as “individual[s] sentenced to imprisonment or death pursuant to a conviction for a Federal offense”).

122 See infra notes 127–204 and accompanying text.

123 See infra notes 127–137 and accompanying text.

124 See infra notes 138–181 and accompanying text.

125 See infra notes 138–181 and accompanying text.

126 See infra notes 182–204 and accompanying text.
A. An Introduction to Post-Conviction DNA Testing Statutes

In 1996, the National Institute of Justice (“NIJ”) released a report studying the cases of the twenty-eight wrongfully convicted individuals who had been exonerated based on post-conviction DNA testing to date.127 Just a couple years later, in 1998 and 1999, respectively, Illinois and New York became the first two states to enact post-conviction DNA testing statutes.128 Also in 1999, the Post-Conviction Issues Working Group, part of the National Commission on the Future of DNA Evidence (“National DNA Commission”), published a report making recommendations regarding post-conviction DNA testing.129 Shortly after the publication of this report, in 2000, eight more states enacted

127 NAT’L INST. OF JUSTICE, U.S. DEP’T OF JUSTICE, CONVICTED BY JURIES, EXONERATED BY SCIENCE: CASE STUDIES IN THE USE OF DNA EVIDENCE TO ESTABLISH INNOCENCE AFTER TRIAL 2 (1996) [hereinafter CONVICTED BY JURIES], https://www.ncjrs.gov/pdffiles/dnaevid.pdf [https://perma.cc/3ABK-7WPD]; Steinback, supra note 73, at 336. The study began in June 1995. CONVICTED BY JURIES, supra, at 2. The study’s purpose was “to identify and review” DNA exoneration cases. Id. One of the twenty-eight cases studied was the case of Gary Dotson. Id. at ix–x; see supra note 73 and accompanying text (describing the case of the first DNA exoneree, Gary Dotson, who was wrongfully convicted of rape). The study made several findings, including the following: most of the convictions occurred in the mid- to late-1980s, before DNA testing became easily accessible; sexual assault was present in all twenty-eight cases; most of the cases involved some kind of forensic evidence; most of the post-conviction DNA testing was performed by private laboratories; and some laboratories used RFLP testing and others used PCR testing. CONVICTED BY JURIES, supra, at 12, 15, 19.


129 DNA TESTING RECOMMENDATIONS, supra note 128, at vi, vii; Steinback, supra note 73, at 336. Attorney General Janet Reno asked the NIJ to create the National DNA Commission after she read about a DNA exoneration. DNA TESTING RECOMMENDATIONS, supra note 128, at v. Attorney General Reno was concerned about possible wrongful convictions, and she tasked the National DNA Commission with making “recommendations . . . that [would] help ensure more effective use of DNA as a crimefighting tool and foster its use throughout the entire criminal justice system.” Id. The National DNA Commission was comprised of members representing the forensic science and legal communities. See id. at vi. In its report, the Post-Conviction Issues Working Group made recommendations for prosecutors, defense counsel, the judiciary, victim assistance, and laboratory personnel. Id. at ix, xv, xvi, xvii. Its recommendations included the following: (1) when prosecutors receive a request for post-conviction DNA testing, they should thoroughly research the case, including any previous DNA testing, and consult and notify other involved parties, including victim/witness specialists and forensic DNA experts; (2) when defense counsel receive a request for post-conviction DNA testing, they should screen the case and search for evidence; (3) courts should schedule conferences to facilitate discussion of the type of DNA testing to be performed, and if the DNA testing results exclude the defendant, the court should vacate the conviction; (4) victim assistance specialists should notify crime victims and their family members of the DNA testing; and (5) laboratories should serve as consultants to the other parties as needed, and laboratories should use only the amount of sample necessary for the test and retain untested samples. See id. at xv–xvii (making the recommendations listed here as well as additional recommendations).
post-conviction DNA testing statutes.\textsuperscript{130} In 2004, Congress enacted the federal post-conviction DNA testing statute.\textsuperscript{131} By 2013, all fifty states had enacted post-conviction DNA testing statutes.\textsuperscript{132}

Although the various state and federal post-conviction DNA testing statutes are not identical, there are several elements that are common to many of these statutes.\textsuperscript{133} For example, some typical filing requirements are: the petitioner must have been convicted of a major felony; the identity of the perpetrator of the crime must have been an issue at trial; and the petitioner must be within the statute of limitations.\textsuperscript{134} Then, statutes commonly require that the evidence to be tested is material to the defense and that the evidence meet “chain of custody” standards demonstrating that it is reliable.\textsuperscript{135} Some statutes also specify whether a state or independent lab will perform the testing and who will pay for the testing.\textsuperscript{136} Additionally, some statutes explain the standard for relief after testing is completed and results are reported.\textsuperscript{137}


\textsuperscript{131} 18 U.S.C. § 3600 (2006); Justice for All Act of 2004, Title IV § 411(a)(1).


\textsuperscript{133} \textit{See} Steinback, \textit{supra} note 73, at 336–38 (describing several provisions common to many post-conviction DNA testing statutes).


\textsuperscript{135} Steinback, \textit{supra} note 73, at 337; Swedlow, \textit{supra} note 134, at 367–70 (describing the materiality requirement included in several post-conviction DNA testing statutes); \textit{id.} at 370–72 (describing the chain of custody requirement included in several post-conviction DNA testing statutes).

\textsuperscript{136} Steinback, \textit{supra} note 73, at 337–38; Swedlow, \textit{supra} note 134, at 381–82 (describing post-conviction DNA testing statutes’ provisions regarding payment for the costs of DNA testing).

\textsuperscript{137} Steinback, \textit{supra} note 73, at 337–38; Swedlow, \textit{supra} note 134, at 382–84 (discussing the standards for relief under several post-conviction DNA testing statutes). The Innocence Project makes several recommendations for improving state post-conviction DNA testing statutes. \textit{See generally Access to Post-Conviction DNA Testing}, INNOCENCE PROJECT, \texttt{https://www.innocenceproject.org/access-post-conviction-dna-testing} [https://perma.cc/SZV4-84CZ] (recommending several improvements to post-conviction DNA testing statutes). The Innocence Project’s recommendations address:

(1) who may file, (2) standards to be used by the courts in determining when to order a post-conviction DNA test, (3) the ‘chain of custody’ requirement to ensure the reliabil-
B. Post-Conviction Access to DNA Database Searches Under State Statutes

Once a post-conviction litigant clears all of the hurdles in a state statute, he or she can obtain post-conviction DNA testing, which may exclude the litigant as the source of the DNA recovered from the crime scene. In some cases, however, exculpatory post-conviction DNA testing results alone have not been enough to establish innocence in the eyes of a court. Some wrongfully convicted defendants have needed the additional step of a DNA database search to identify the actual perpetrators of the crimes for which they were wrongfully convicted in order to prove their innocence.

Steinback, supra note 73, at 338. Some of the Innocence Project’s recommendations include the following: allow access to post-conviction DNA testing even in cases where the post-conviction litigant pled guilty or confessed to the crime; allow litigants access to search national and state DNA databases; require preservation of biological evidence; allow appeals of denials of post-conviction DNA testing; and provide funding for post-conviction DNA testing. Access to Post-Conviction DNA Testing, supra.

See Kreag, supra note 8, at 806 (explaining that post-conviction DNA testing excluded both Michael Morton and Rickey Dale Wyatt as the source of crime-scene DNA in each of their cases); Steinback, supra note 73, at 336–38 (describing the requirements to obtain post-conviction DNA testing under state statutes); see, e.g., supra notes 1–26 and accompanying text (describing the case of Michael Morton, who was wrongfully convicted of murdering his wife and obtained exculpatory post-conviction DNA testing but was not exonerated until a DNA database search identified the actual perpetrator); supra note 26 (describing the case of Rickey Dale Wyatt, who was wrongfully convicted of aggravated rape and obtained exculpatory DNA testing results but was not allowed access to search any DNA databases).

See Kreag, supra note 8, at 806–08 (describing the story of Michael Morton, who obtained post-conviction DNA testing that excluded him as the source of DNA connected to his wife’s murder, but who was unable to prove his innocence until he obtained a DNA database search that identified the actual perpetrator of the crime).

See id. (describing Michael Morton’s case). The case of Jeffrey Deskovic provides another example. Id. at 825. On November 15, 1989, a 15-year-old girl was raped and murdered in Peekskill, New York while out working on a photography assignment for school. Profile of Jeffrey Deskovic, NAT’L REGISTRY OF EXONERATIONS, https://www.law.umich.edu/special/exoneration/Pages/casedetail.aspx?caseid=3171 [https://perma.cc/8YNJ-L7W7]. Police suspected 16-year-old Deskovic, the victim’s classmate, because he was tardy to school the day after the victim disappeared and was very upset after learning of her death. Id. Months after the murder, police interrogated Deskovic for six hours and administered three polygraph examinations, after which Deskovic falsely confessed to the crime. Id. Before trial, DNA testing excluded Deskovic as a source of the semen found on the vaginal swabs from the victim’s rape kit. Id. Despite this evidence, the prosecution continued their case against Deskovic. Id. At trial, the prosecution argued that the victim had consensual sex and that that partner was the source of the semen in the victim’s rape kit. Id. The prosecution argued that Deskovic was jealous of the victim’s partner and murdered the victim out of jealousy. Id. A jury in Westchester County, New York convicted Deskovic of first-degree rape and second-degree murder in January 1991. Id. In 2006, Deskovic obtained post-conviction DNA testing and a search of the New York State DNA databank of convicted felons. Id. The search identified Steven Cunningham as the source
DNA database searches can help prove wrongfully convicted individuals’ innocence. In cases where the post-conviction litigant has already obtained DNA testing that excludes the litigant as the source of the DNA from the crime, a DNA database search could identify the actual perpetrator, which would conclusively establish the litigant’s innocence and lead to exoneration. Even if the DNA database did not contain a known-offender DNA profile from the actual perpetrator, that perpetrator’s profile could still be in the DNA database in the form of a DNA profile from an unsolved crime, and this search would indicate that a serial offender is likely the actual perpetrator of the crime.

Despite the power of DNA database searches, the fact that all fifty states have enacted post-conviction DNA testing statutes, and the fact that all fifty states participate in NDIS, only nine states have enacted statutes allowing post-conviction litigants access to search DNA databases. Without a statute grant-

of the semen in the victim’s rape kit. Id. Cunningham had previously been convicted of murdering his girlfriend’s sister. Id. On September 20, 2006, Deskovic’s conviction was overturned, and he was exonerated on November 2, 2006. Id.

Kreag, supra note 8, at 817, 818.

Id. at 817; see Brandon L. Garrett, Claiming Innocence, 92 MINN. L. REV. 1629, 1659 (2008) (explaining that, in some cases, despite exculpatory DNA testing results, the prosecution did not admit that the defendant was innocent until a DNA database search identified the actual perpetrator); see, e.g., supra notes 1–26 and accompanying text (describing the case of Michael Morton, who obtained exculpatory post-conviction DNA testing but was not exonerated until a DNA database search identified his wife’s actual killer); supra note 140 (describing the case of Jeffrey Deskovic); see also Banks v. United States, 490 F.3d 1178, 1188–89 (10th Cir. 2007) (explaining that “a negative [DNA test] result would not necessarily exculpate the defendant”). Additional examples of cases where wrongfully convicted individuals needed DNA database searches to identify the actual perpetrators in order to prove their own innocence include the cases of Steven Avery, Darryl Hunt, Douglas Warney, and Jerry Watkins. See Garrett, supra, at 1659 n.133, 1713 n.403; Know the Cases: Darryl Hunt, INNOCENCE PROJECT, https://www.innocenceproject.org/cases/darryl-hunt [https://perma.cc/Z2UC-NAN5] (recounting the case of Darryl Hunt, who was wrongfully convicted of murder and was exonerated after a search of a North Carolina state DNA database identified the actual perpetrator); Know the Cases: Douglas Warney, INNOCENCE PROJECT, https://www.innocenceproject.org/cases/douglas-warney [https://perma.cc/7JQK-76LW] (explaining the case of Douglas Warney, who was wrongfully convicted of murder and was exonerated after a search of NDIS identified the actual perpetrator); Know the Cases: Jerry Watkins, INNOCENCE PROJECT, https://www.innocenceproject.org/cases/jerry-watkins [https://perma.cc/6VU2-Y5SS] (recounting the case of Jerry Watkins, who was wrongfully convicted of murder and exonerated after a search of the Indiana State Police DNA database identified the actual perpetrator); Know the Cases: Steven Avery, INNOCENCE PROJECT, https://www.innocenceproject.org/cases/steven-avery [https://perma.cc/2Y7B-EKHH] (describing the case of Steven Avery, who was wrongfully convicted of rape and was exonerated after a search of the FBI’s DNA database identified the actual perpetrator).

Kreag, supra note 8, at 817 & n.59.

144 Abrams & Garrett, supra note 34, at 779 (2015); Kreag, supra note 8, at 808 & n.13; Bronner, supra note 33; Frequently Asked Questions on CODIS and NDIS, supra note 82. The nine states are Colorado, Georgia, Illinois, Maryland, Mississippi, New York, North Carolina, Ohio, and Texas. COLO. REV. STAT. § 18-1-412(9) (2017); GA. CODE ANN. § 5-5-41(9) (2017); 725 ILL. COMP. STAT. ANN. 5/116-5 (West 2017); MD. CODE ANN., CRIM. PROC. § 8-201(d)(2) (West 2017); MISS. CODE ANN. § 99-39-11(10) (2017); N.Y. CRIM. PROC. LAW § 440.30.1-a(c) (McKinney 2017); N.C. GEN.
ing access, law enforcement agencies and prosecutor’s offices have discretion to decide whether to allow post-conviction litigants to search DNA databases. For many defendants, it is challenging to obtain prosecutors’ agreement to DNA database searches because the cases are complex and convictions have an “anchoring effect,” causing prosecutors to believe that there is so much evidence of the defendant’s guilt that DNA testing is pointless. Even if a prosecutor’s office agrees to a DNA database search, a post-conviction litigant may still face opposition from the law enforcement agency that maintains the databases and performs the search. For example, in one case, the FBI opposed a post-conviction litigant’s request for a DNA database search even though the prosecutor and local law enforcement agreed to the search. In contrast, a fairer approach to providing post-conviction litigants with access to DNA database searches may be for states to enact statutes that instruct trial

STAT. § 15A-269 (2017); OHIO REV. CODE ANN. § 2953.74(E) (West 2017); TEX. CODE CRIM. PROC. ANN. art. 64.035 (West 2017); Kreag, supra note 8, at 808 n.13; Bronner, supra note 33.

145 Kreag, supra note 8, at 818. If a post-conviction litigant can, however, convince the prosecutor to agree to the DNA database search and file a joint request with the court, then the post-conviction litigant will be more likely to succeed. Id. at 818–20.

146 Kreag, supra note 8, at 820–22. Two barriers to post-conviction DNA database searches are the “anchoring effect of a conviction,” and law enforcement opposition. Id. The “anchoring effect” refers to the concept that prosecutors believe that there is “overwhelming evidence” of the post-conviction litigant’s guilt, so there is no need for DNA testing. Id. at 821.

147 Id. at 820. In Juan Rivera’s case, the prosecutor and local law enforcement joined the defendant in seeking a DNA database search, and the trial court ordered the FBI to conduct the search, yet the FBI still opposed the request and refused to perform the search. Id. at 822–25. In 1992, Rivera was convicted of raping and murdering an eleven-year-old girl near Chicago, Illinois. Id. at 822–23. In 2005, post-conviction DNA testing excluded Rivera as the source of the male DNA in the victim’s rape kit. Id. at 823. The prosecutor and local law enforcement agreed to a DNA database search. Id. Law enforcement performed manual keyboard searches of the Illinois state DNA databases, but there were no matches. Id. Rivera requested a search of the national DNA database, and the prosecutor agreed again. Id. In June 2008, the state trial court ordered the FBI to conduct a manual keyboard search of the national DNA database, but the FBI refused to perform the search. Id. On February 2, 2009, the United States District Court for the Northern District of Illinois ordered the FBI to conduct the DNA database search. Rivera v. Mueller, 596 F. Supp. 2d 1163, 1173 (N.D. Ill. 2009); Kreag, supra note 8, at 824. The FBI performed the manual keyboard search, but there were no hits. Kreag, supra note 8, at 824. In 2014, however, the partial crime-scene DNA profile was linked to a murder that happened near Chicago in 2000, while Rivera was incarcerated. Id; Steve Mills & Dan Hinkel, DNA Links Murder and Rape of Holly Tanner, 11, to Second Murder 8 Years Later, CHI. TRIB. (June 10, 2014), https://www.chicagotribune.com/news/ct-xpm-2014-06-10-chi-dna-links-murder-and-rape-of-holly-staker-11-to-second-murder-8-years-later-20140610-story.html [https://perma.cc/3XPL-SGQE?type=image]. See generally Rivera, 596 F. Supp. 2d 1163; Andrew Martin, The Prosecution’s Case Against DNA, N.Y. TIMES MAG., Nov. 25, 2011, at M44, https://www.nytimes.com/2011/11/27/magazine/dna-evidence-lake-county.html [https://perma.cc/7N8M-6K4U]; Rob Warden, Juan Rivera, BLUHM LEGAL CLINIC: CTR. ON WRONGFUL CONVICTIONS, http://www.law.northwestern.edu/legalclinic/wrongfulconvictions/exonerations/il/juan-rivera.html [https://perma.cc/2G49-K7FW].
courts to evaluate these complex cases and grant DNA database searches where the appropriate statutory criteria are met. 149

1. Illinois

In 1998, Illinois became the first state to enact a post-conviction DNA testing statute. 150 Five years later, in 2003, the Illinois legislature enacted another statute, which created a motion for DNA database search, available to both pre-trial defendants and post-conviction litigants. 151 Compared to other states’ statutes, the Illinois statute has one of the lowest standards for obtaining a DNA database search—the statute’s only requirement is that DNA evidence may be material or relevant to the defendant’s case. 152 The statute, however, balances this low standard with a trade-off—even if the materiality-relevance requirement is met, the court still has discretion to decide whether to order the DNA database search or not. 153

Although the statute gives the court discretion, rather than making the DNA database search mandatory, the statute provides for a thorough search where the

149 See Kreag, supra note 8, at 819–20 (proposing a formal process for trial courts to follow when post-conviction litigants seek access to DNA database searches).

150 725 ILL. COMP. STAT. ANN. 5/116-3(a); DNA TESTING RECOMMENDATIONS, supra note 128, at 10 n.2; Steinback, supra note 73, at 336 & n.34.

151 See 725 ILL. COMP. STAT. ANN. 5/116-5. The Illinois DNA database search statute is separate from the Illinois post-conviction DNA testing statute. Compare id. § 5/116-3(a) (providing post-conviction litigants with access to DNA testing), with id. § 5/116-5 (providing post-conviction litigants with access to DNA database searches). The DNA database search statute requires that the post-conviction litigant has already obtained DNA testing before submitting a motion requesting the DNA database search. See id. § 5/116-5(a); Kreag, supra note 8, at 817. The Illinois DNA database search statute provides searches to pre-trial defendants as well, but defendants’ access to DNA database searches pre-trial is less significant than post-conviction access because law enforcement agencies routinely perform searches pre-trial, even if defendants do not request the searches. 725 ILL. COMP. STAT. ANN. 5/116-5(a); Kreag, supra note 8, at 809 n.14.

152 Compare 725 ILL. COMP. STAT. ANN. 5/116-5(a) (requiring only that DNA evidence may be material or relevant to the defendant’s case), with N.C. GEN. STAT. § 15A-269(a)–(b) (listing five requirements that a post-conviction litigant must meet in order to obtain post-conviction DNA testing and a DNA database search).

153 725 ILL. COMP. STAT. ANN. 5/116-5(a). Like Illinois, Mississippi and New York also allow trial courts discretion to decide whether to order a DNA database search, rather than making the search mandatory. See id.; Miss. CODE ANN. § 99-39-11(10); N.Y. CRIM. PROC. LAW § 440.30.1-a(c). In contrast, the Maryland, North Carolina, and Texas statutes make DNA database searches mandatory if the appropriate requirements are met. See MD. CODE ANN., CRIM. PROC. § 8-201(d)(2); N.C. GEN. STAT. § 15A-269(a)–(b); TEX. CODE CRIM. PROC. ANN. art. 64.035. The North Carolina statute has the opposite trade-off compared to the Illinois statute—the North Carolina statute has greater requirements, but it makes a DNA database search mandatory rather than permissive. Compare 725 ILL. COMP. STAT. ANN. 5/116-5(a) (requiring only that DNA evidence may be material or relevant to the defendant’s case but allowing courts discretion to decide whether to grant DNA database searches), with N.C. GEN. STAT. § 15A-269(a)–(b) (making DNA database searches mandatory but requiring that five criteria are met for a post-conviction litigant to obtain DNA testing and a DNA database search).
court chooses to order it.154 Under the statute, the search may include comparing a crime-scene DNA profile against both known-offender profiles and DNA profiles from unsolved crimes maintained in state or local law enforcement databases.155 Additionally, the court may order the Illinois Department of State Police to request a search of NDIS if the appropriate federal criteria are met.156 Thus, the statute potentially provides access to all possible DNA databases and searches, except that the statute fails to explain whether a court can order a keyboard search for a partial crime-scene DNA profile.157 If the defense requests, the Illinois Department of State Police must also provide the defense with copies of all documentation, including notes and reports, related to the DNA database search and analysis.158 Therefore, the statute ensures that the defense has access to the same documentation as law enforcement and prosecutors.159

2. North Carolina

The North Carolina legislature enacted the state’s post-conviction DNA testing statute—section 15A-269 of the North Carolina Code—in 2001, but the statute did not provide for DNA database searches until the legislature amended it for the fourth time in 2009.160 Unlike the Illinois statute, the North Carolina statute is specific to post-conviction litigants and is not available to pre-trial defendants.161 The North Carolina statute has more stringent requirements than the Illinois statute, but, if the applicant meets all five requirements, the trial court must grant both DNA testing and a CODIS search.162

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154 See 725 ILL. COMP. STAT. ANN. 5/116-5(a)(1)–(2), (a)(3)(ii), (b), (c).
156 Id. § 5/116-5(b). The criteria for a search of NDIS include that the DNA testing was performed using an approved kit and that the DNA profile is sufficiently complete. NDIS MANUAL, supra note 21, at 39. In contrast to Illinois, the Colorado DNA database search provision takes a different approach and allows only for a search of state DNA databases, not a search of NDIS. See COLO. REV. STAT. § 18-1-412(9) (referring specifically to the “state index system”); 725 ILL. COMP. STAT. ANN. 5/116-5(b) (allowing for a search of NDIS if the “appropriate federal criteria are met”).
157 See ch. 725, 5/116-5(b) (not enumerating whether the statute provides for keyboard searches); NDIS MANUAL, supra note 21, at 50 (describing keyboard searches); Kreag, supra note 8, at 816 (describing keyboard searches).
158 725 ILL. COMP. STAT. ANN. 5/116-5(c).
159 See id. (providing the defense access to the same documentation as the prosecution).
161 N.C. GEN. STAT. § 15A-269(a) (2017). Unlike the Illinois statute, the North Carolina statute refers only to post-conviction litigants and not to pre-trial defendants. Compare id. § 15A-269 (titled “Request for post-conviction DNA testing”), with 725 ILL. COMP. STAT. ANN. 5/116-5(a) (allowing any defendant “charged with any offense where DNA evidence may be material to the defense investigation or relevant at trial” to apply for a DNA database search).
162 Compare N.C. GEN. STAT. § 15A-269(a)–(b) (making DNA database searches mandatory but requiring that five criteria be met for a post-conviction litigant to obtain DNA testing and a DNA
requirements are (1) that the evidence be material to the defense; (2) that the evidence be related to the conviction; (3) that the evidence either (a) have not previously been DNA tested, or (b) have been previously tested, but the new results would be “significantly more accurate and probative of the identity of the perpetrator or accomplice or have a reasonable probability of contradicting prior test results”; (4) that it be reasonably probable that the DNA testing would have resulted in a verdict better for the defendant; and (5) that the defendant signed an affidavit asserting his innocence.163

Although the North Carolina statute makes a CODIS search mandatory where the five requirements are met, the statute lacks the detailed description of the DNA database search that the Illinois statute includes.164 The North Carolina statute does not specify which law enforcement agency will perform the DNA database search or which specific databases in CODIS that will be

database search), with 725 ILL. COMP. STAT. ANN. 5/116-5(a) (requiring only that DNA evidence may be material or relevant to the defendant’s case, but allowing courts discretion to decide whether to grant DNA database searches). Other state statutes that, like the North Carolina statute, make a DNA database search mandatory include Maryland and Texas. See MD. CODE ANN., CRIM. PROC. § 8-201(d)(2) (“A court shall order a data base search . . . . ”); N.C. GEN. STAT. § 15A-269(b) (“The court shall grant the motion for DNA testing and, if testing complies with FBI requirements, the run of any profiles obtained from the testing . . . . ”); TEX. CODE CRIM. PROC. ANN. art. 64.035 (“[T]he convicting court shall order any unidentified DNA profile to be compared with the DNA profiles in [NDIS and the Texas state DNA database].”). Because the North Carolina statute provides for both post-conviction DNA testing and a DNA database search, a post-conviction litigant can request both DNA testing and a DNA database search simultaneously, rather than having to obtain DNA testing results before requesting a DNA database search. See N.C. GEN. STAT. § 15A-269(a)–(b); Kreag, supra note 8, at 818 (explaining that some post-conviction litigants seek post-conviction DNA testing and a DNA database search simultaneously).

163 N.C. GEN. STAT. § 15A-269(a)(1)–(3), (b)(1)–(3). The North Carolina statute’s requirements are significant in comparison to the Illinois statute’s minimal requirements. Compare id. § 15A-269(a)–(b) (making DNA database searches mandatory but requiring that five criteria be met for a post-conviction litigant to obtain DNA testing and a DNA database search), with 725 ILL. COMP. STAT. ANN. 5/116-5(a) (requiring only that DNA evidence may be material or relevant to the defendant’s case but allowing courts discretion to decide whether to grant DNA database searches). The Maryland and New York DNA database statutes have similar requirements to the North Carolina statute. Compare MD. CODE ANN., CRIM. PROC. § 8-201(d)(2) (“A court shall order a data base search by a law enforcement agency if the court finds that a reasonable probability exists that the database search will produce exculpatory or mitigating evidence relevant to a claim of wrongful conviction or sentencing.”), and N.Y. CRIM. PROC. LAW § 440.30.1-a(c) (stating that a trial court may order a CODIS search if there is a reasonable probability that, had the search been conducted and admitted at trial, the verdict would have been more favorable to the defendant), with N.C. GEN. STAT. § 15A-269(a)–(b) (requiring that five criteria are met for a post-conviction litigant to obtain DNA testing and a DNA database search).

164 See N.C. GEN. STAT. § 15A-269(a)–(b) (not providing detailed instructions for the law enforcement agency performing the DNA database search). Compare id. § 15A-269(a)–(b) (not providing detailed instructions for the law enforcement agency performing the DNA database search), with 725 ILL. COMP. STAT. ANN. 5/116-5(a) (detailed the process that the Illinois Department of State Police should follow when it performs a DNA database search).
searched. Additionally, the North Carolina statute does not state whether the crime-scene DNA profile will be compared against only the DNA profiles of known individuals or whether it will be compared against other crime-scene DNA profiles from unsolved crimes as well. Like the Illinois statute, the North Carolina statute fails to explain whether a post-conviction litigant can obtain a keyboard search under the statute. The North Carolina statute also lacks language requiring that documentation related to the DNA database search be provided to the defense.

3. Ohio

Ohio enacted its post-conviction DNA testing statute in 2003. The DNA database search provision was not added to the statute until an amend-

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165 See N.C. GEN. STAT. § 15A-269(a)–(b) (not specifying a law enforcement agency that conducts the DNA database search, and only stating that "if testing complies with FBI requirements and the data meets NDIS criteria, profiles obtained from the testing shall be searched and/or uploaded to CODIS if the biological evidence meets all of the . . . conditions [in this statute]"). Most precisely, the term “CODIS” refers to the FBI’s software for running DNA databases, but the term “CODIS” is also used to refer generally to DNA databases that participate in the FBI’s program. See Frequently Asked Questions on CODIS and NDIS, supra note 82 (defining CODIS as "the generic term used to describe the FBI’s program of support for criminal justice DNA databases as well as the software used to run these databases"). Based on this common usage of “CODIS” as a generic term to refer to all DNA databases, it is possible that the legislature intended for the statute to include searches of state and local DNA databases as well as NDIS. See N.C. GEN. STAT. § 15A-269; Frequently Asked Questions on CODIS and NDIS, supra note 82. Like the North Carolina statute, the Mississippi and New York statutes also refer specifically to searching CODIS. Compare N.C. GEN. STAT. § 15A-269(a), with MISS. CODE ANN. § 99-39-11(10), and N.Y. CRIM. PROC. LAW § 440.30.1-a(c).

166 See N.C. GEN. STAT. § 15A-269(a)–(b) (not specifying which types of DNA profiles the crime-scene DNA profile will be compared against); Kreag, supra note 8, at 815–16 (stating that NDIS is able to compare a crime-scene DNA profile against profiles of known offenders and other crime-scene DNA profiles in NDIS).

167 Compare N.C. GEN. STAT. § 15A-269(a)–(b) (not stating whether keyboard searches are allowed under the statute), with 725 ILL. COMP. STAT. ANN. 5/116-5(a)–(d) (not stating whether keyboard searches are allowed under the statute).

168 Compare N.C. GEN. STAT. § 15A-269(a)–(b) (not stating whether documentation related to the DNA database search will be provided to the defense), with 725 ILL. COMP. STAT. ANN. 5/116-5(c) (stating that, at the defense’s request, “[t]he defense shall be provided with copies of all documentation, correspondence, including digital correspondence, notes, memoranda, and reports generated in relation to the analysis").

169 OHIO REV. CODE ANN. § 2953.72–73 (2003). In 2016, in State v. Noling, the Supreme Court of Ohio held section 2953.73(E)(1) unconstitutional for violating the right to equal protection under both the United States Constitution and the Ohio Constitution, and the court severed this provision from the rest of the statute. 75 N.E.3d 141, 156–57 (Ohio 2016). The court concluded that the statute violated the right to equal protection because it established different procedures for capital and non-capital offenders to appeal denials of applications for post-conviction DNA testing, and there was no legitimate purpose for doing so. Id. at 144–45, 149–50.
ment in 2006. In Ohio, a post-conviction litigant must first apply for post-conviction DNA testing under section 2953.73, and, if the court grants the testing, the court may then order the Ohio Bureau of Criminal Identification and Investigation to perform a CODIS search under section 2953.74(E). The Ohio statute shares a few of the North Carolina statute’s potential shortcomings. First, like the North Carolina statute, the Ohio statute does not specify which specific databases included in CODIS will be searched. Second, the Ohio statute does not state whether the crime-scene DNA profile will be compared against only the DNA profiles of known individuals or whether it will also be compared against other crime-scene DNA profiles from unsolved crimes. Third, like both the Illinois and North Carolina statutes, the Ohio statute does not explain whether keyboard searches are permitted.

Otherwise, compared to the Illinois and North Carolina statutes, Ohio’s statute provides some of the most detailed step-by-step instructions for the law enforcement agency conducting the DNA database searches. According to the statute, if the CODIS search identifies the contributor to the DNA profile, then the Ohio Bureau of Criminal Identification and Investigation must provide this information to the court, the post-conviction litigant, and the prosecuting attorney. Alternatively, if the Ohio Bureau of Criminal Identification and Investigation does not identify the contributor from the CODIS search, the


171 Ohio Rev. Code Ann. § 2953.74(E) (West 2017). The Ohio and Illinois statutes both give discretion to the trial court to decide whether to order a DNA database search. Compare id. (“[T]he eligible offender may request the court to order, or the court on its own initiative may order [a DNA database search].”), with 725 Ill. Comp. Stat. Ann. 5/116-5(a) (“[A] court may order a DNA database search . . . .”). Other state statutes giving trial courts discretion to decide whether to grant a DNA database search include Mississippi and New York. See Miss. Code Ann. § 99-39-11(10) (“The court may order . . . .”); N.Y. Crim. Proc. Law § 440.30.1-a(c) (“[T]he court may order . . . .”).


173 Compare Ohio Rev. Code Ann. § 2953.74(E) (referring only to CODIS and not to specific national, state, or local databases), with N.C. Gen. Stat. § 15A-269(a) (also referring only to CODIS). The statutes’ references to “CODIS,” however, could be intended to include all state and local databases as well as NDIS. See supra note 82 (explaining that the term “CODIS” is sometimes used to refer to all the national, state, and local databases that use the CODIS software).

174 See Ohio Rev. Code Ann. § 2953.74(E); Kreag, supra note 8, at 815–16 (stating that NDIS is able to compare a crime-scene DNA profile against profiles of known offenders and other crime-scene DNA profiles in NDIS). Compare § 2953.74(E), with N.C. Gen. Stat. § 15A-269(a)–(b).


176 See Ohio Rev. Code Ann. § 2953.74(E) (specifying the steps that the law enforcement agency performing the DNA database search should take depending on whether the DNA database search identifies the actual perpetrator of the crime or not). Compare id., with 725 Ill. Comp. Stat. Ann. 5/116-5, and N.C. Gen. Stat. § 15A-269(a)–(b).

177 Ohio Rev. Code Ann. § 2953.74(E).
statute instructs that the bureau may compare the crime-scene DNA profile against other DNA testing results where the contributor’s identity is known.\footnote{Id. The statute states that the Ohio Bureau of Criminal Identification and Investigation “may compare the test results to other previously obtained and acceptable DNA test results of any person whose identity is known.” Id. The statute, however, does not explain who—a law enforcement agency, the prosecution, or the defense team—can provide a known-offender DNA profile for comparison or why this known-offender profile would not be in one of the law enforcement DNA databases that was already searched. See id.} Because the statute requires that the DNA profile must be from a known person, the Ohio Bureau of Criminal Identification and Investigation may not compare the test results against DNA profiles from unsolved crimes.\footnote{See id.} If the comparison between the crime-scene DNA profile and known-offenders identifies the contributor to the crime-scene profile, the Ohio Bureau of Criminal Identification and Investigation must provide this information to the court, the post-conviction litigant, and the prosecuting attorney.\footnote{Id.} Unlike the Illinois statute, however, the Ohio statute does not require the law enforcement agency to provide all documentation related to the DNA database search to the post-conviction litigant.\footnote{Compare id. (not specifying that the law enforcement agency performing the DNA database search must provide documentation to the defense), with 725 ILL. COMP. STAT. ANN. 5/116-5(c) (stating that, at the defense’s request, “[t]he defense shall be provided with copies of all documentation, correspondence, including digital correspondence, notes, memoranda, and reports generated in relation to the analysis”).}


Congress enacted the federal post-conviction DNA testing statute—18 U.S.C. § 3600—in 2004.\footnote{18 U.S.C. § 3600 (2012). The federal post-conviction DNA testing statute—§ 3600—is also called the Innocence Protection Act of 2004 (“IPA”). Justice for All Act of 2004, Title IV § 401; David A. Schumacher, Comment, Post-Conviction Access to DNA Testing: The Federal Government Does Not Offer an Adequate Solution, Leaving the States to Remedy the Situation, 57 CATH. U. L. REV. 1245, 1248 (2008). The IPA was enacted as part of the Justice for All Act of 2004 (“JFAA”). Justice for All Act of 2004, Title IV § 411; Schumacher, supra, at 1248. The JFAA had several purposes, including “to provide post-conviction testing of DNA evidence to exonerate the innocent.” Justice for All Act of 2004, Title IV § 411. According to Senator Patrick Leahy, the IPA’s purpose was “to ‘reduce the risk that innocent persons may be executed’ and ‘[e]nsure that convicted offenders are afforded an opportunity to prove their innocence through DNA testing.’ ” Schumacher, supra, at 1248.} Since then, Congress has amended the statute only once, in 2016.\footnote{Compare 18 U.S.C. § 3600 (2006), with 18 U.S.C. § 3600 (Supp. IV 2016). This amendment was part of the Justice for All Reauthorization Act of 2016 (“JFARA”). Justice for All Reauthorization Act of 2016, Pub. L. No. 114-324, § 11(a), 130 Stat. 1956 (2016). One of the JFARA’s purposes is “to provide post-conviction testing of DNA evidence to exonerate the innocent.” Id.} The 2016 amendment added two new provisions to the statute.\footnote{Justice for All Reauthorization Act of 2016 § 11(a). Compare 18 U.S.C. § 3600 (Supp. IV 2016), with 18 U.S.C. § 3600 (2006).} First, the amendment added a requirement that the federal government,
upon the post-conviction litigant’s filing of a motion for post-conviction DNA testing, create an inventory of all evidence in the case and share the inventory with the court and the post-conviction litigant. Second, the amendment added a provision providing that, where the DNA testing excludes the applicant as a contributor to a crime-scene DNA profile, a law enforcement agency will submit the DNA profile to NDIS for comparison against both DNA profiles of known individuals and DNA profiles from unsolved crimes.

1. Eligibility of State Offenses

Only individuals incarcerated for federal convictions are eligible to apply for post-conviction DNA testing under § 3600. An applicant can apply for DNA testing related to the federal offense that he or she is incarcerated for or for DNA testing related to another federal offense that was a factor at the applicant’s sentencing. The statute also allows applicants to move for post-conviction DNA testing in connection with some state convictions. Only a limited number of state convictions qualify for federal relief, however, because the statute requires that the applicant is currently imprisoned for a federal offense, that evidence of the state offense was admitted at a federal sentencing hearing to support a sentence from which the applicant could get relief if exonerated for the state offense, and (ii) for a state offense, there is no adequate DNA testing remedy under state law, and the applicant has exhausted all state DNA testing remedies; (2) the evidence for which the applicant requests DNA testing was obtained in connection with the investigation or prosecution of the federal or state offense of which the defendant claims to be innocent; (3) either (a) the evidence has not been DNA tested or (b) a new DNA testing method is “substantially more probative than the prior DNA testing”; (4) the government has the evidence in its possession, and the evidence meets chain of custody standards; (5) “[t]he proposed DNA testing is reasonable in scope, uses scientifically sound methods, and is consistent with accepted forensic practices”; (6) the applicant’s theory of defense is consistent with affirmative defenses presented at trial and would establish actual innocence; (7) the perpetrator’s identity was at issue at trial; (8) the proposed DNA testing “may produce new material evidence” supporting the defense’s theory and “rais[ing] a reasonable probability that the applicant did not commit the offense”; (9) the applicant will provide a DNA sample; and (10) the motion is timely. See § 3600(a)(1)–(10) (listing these requirements in more detail). The 2016 amendment did not alter the elements required for a post-conviction litigant to obtain DNA testing.

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187 18 U.S.C. § 3600(a) (Supp. IV 2016). Any “individual sentenced to imprisonment or death pursuant to a conviction for a Federal offense” qualifies as an “applicant” and may apply for relief under § 3600. Id. § 3600(a)(1). Under § 3600, a court must grant post-conviction DNA testing if the applicant meets all the following requirements: (1) the applicant claims that he or she is actually innocent of either (a) the federal offense that he or she is currently imprisoned for, or (b) another federal or state offense that he or she was convicted of, where (i) evidence of that federal or state offense was admitted during a federal sentencing hearing to support a sentence from which the applicant could get relief if exonerated for the state offense, and (ii) for a state offense, there is no adequate DNA testing remedy under state law, and the applicant has exhausted all state DNA testing remedies; (2) the evidence for which the applicant requests DNA testing was obtained in connection with the investigation or prosecution of the federal or state offense of which the defendant claims to be innocent; (3) either (a) the evidence has not been DNA tested or (b) a new DNA testing method is “substantially more probative than the prior DNA testing”; (4) the government has the evidence in its possession, and the evidence meets chain of custody standards; (5) “[t]he proposed DNA testing is reasonable in scope, uses scientifically sound methods, and is consistent with accepted forensic practices”; (6) the applicant’s theory of defense is consistent with affirmative defenses presented at trial and would establish actual innocence; (7) the perpetrator’s identity was at issue at trial; (8) the proposed DNA testing “may produce new material evidence” supporting the defense’s theory and “rais[ing] a reasonable probability that the applicant did not commit the offense”; (9) the applicant will provide a DNA sample; and (10) the motion is timely. See § 3600(a)(1)–(10) (listing these requirements in more detail). The 2016 amendment did not alter the elements required for a post-conviction litigant to obtain DNA testing. See Justice for All Reauthorization Act of 2016 § 11(a). Compare 18 U.S.C. § 3600 (Supp. IV 2016), with 18 U.S.C. § 3600 (2006).
189 Id. § 3600(a)(1)(B).
hearing to support a sentence from which the applicant could get relief if exonerated for the state offense, and that the applicant has exhausted state remedies.\textsuperscript{190}

This eligibility requirement significantly restricts the number of wrongfully convicted individuals who can apply for post-conviction DNA testing under the federal statute.\textsuperscript{191} Considering applicants convicted of federal offenses, there are relatively few known wrongful convictions for federal offenses; rather, the majority of wrongful convictions that are discovered involve state offenses.\textsuperscript{192} Of the 2,360 exonerations since 1989 included in the National Registry of Exonerations, only 111 (4.7\%) are for federal offenses.\textsuperscript{193} Moreover, of those 111 exonerations for federal offenses, DNA was present in only one case, and there were only nine cases—four murder cases and five sexual assault cases—of the type where DNA evidence is commonly found.\textsuperscript{194} When federal wrongful convictions are discovered, they are largely for crimes like fraud, conspiracy, and drug offenses, where there typically is no DNA evidence.\textsuperscript{195} Furthermore, in the one federal wrongful conviction case where DNA

\textsuperscript{190} Id. § 3600(a)(1)(B)(i)–(ii); Harris v. Wolfenbarger, No. 2:05-CV-74316, 2012 U.S. Dist. LEXIS 114781, at *1–2 (E.D. Mich. Aug. 15, 2012) (holding that only federal prisoners, not state prisoners, are eligible to file for post-conviction DNA testing under § 3600); Sartain v. State, 401 P.3d 701, 704 (Mont. 2017) (denying the plaintiff’s request for DNA testing under § 3600 because he was not imprisoned for a federal offense). If an applicant asserts innocence not of the federal offense that he or she is currently serving a prison sentence for, but rather, of another federal or state offense, then the statute requires that “evidence of such offense was admitted during a Federal sentencing hearing and exoneration of such offense would entitle the applicant to a reduced sentence or new sentencing hearing.” 18 U.S.C. § 3600(a)(1)(B)(i). Additionally, if the applicant asserts innocence of a state offense, the statute also requires that “the applicant demonstrates that there is no adequate remedy under State law to permit DNA testing of the specified evidence relating to the State offense” and “to the extent available, the applicant has exhausted all remedies available under State law for requesting DNA testing of specified evidence relating to the State offense.” Id. § 3600(a)(1)(B)(ii)(I)–(II).

\textsuperscript{191} See § 3600(a)(1)(B)(i)–(ii); Exonerations in the United States, supra note 27 (select “Federal” next to “Fed/Non-Fed” to filter for federal cases) (showing that, as of December 20, 2018, out of 2,360 exonerations since 1989, only 111 (4.7\%) are for federal crimes).

\textsuperscript{192} See Exonerations in the United States, supra note 27 (select “Federal” next to “Fed/Non-Fed” to filter for federal cases) (providing the number of exonerations for federal and state crimes).

\textsuperscript{193} Id. (select “Federal” next to “Fed/Non-Fed” to filter for federal cases).

\textsuperscript{194} Id. (select “Federal” next to “Fed/Non-Fed” to filter for federal cases; then select “Present” next to “DNA” to filter for cases involving DNA, or select “Murder” under “Crime” to filter for murder cases, or select “Sexual Assault” under “Crime” to filter for sexual assault cases); see infra note 196 (detailing the case of Eric Smith, the only federal exoneree whose case involved DNA).

\textsuperscript{195} See Exonerations in the United States, supra note 27 (select “Federal” next to “Fed/Non-Fed” to filter for federal cases; then select “Present” next to “DNA” to filter for cases involving DNA, or select “Murder” under “Crime” to filter for murder cases; then select “Other” under “Crime” to filter for cases involving other crimes, such as fraud and conspiracy). Most DNA exonerations are rape and rape-murder cases because these are the types of cases where it is common for the perpetrator to leave biological evidence at the crime scene, whereas biological evidence is less common in other types of cases, such as robbery cases, for instance. See GARRETT, supra note 28, at 5 (explaining that, out of the first 250 DNA exonerations, the most common crimes were rape, rape-murder, and murder, whereas other
was present, DNA was not the basis for the exoneration. This analysis suggests that there are few individuals wrongfully convicted of federal crimes successfully applying for and being exonerated based on post-conviction DNA testing under § 3600.

Regarding state offenses, although § 3600 provides an avenue for post-conviction DNA testing for some applicants with state offenses, the requirements that the applicant be imprisoned for a federal offense and that evidence of the state offense have been admitted at a federal sentencing hearing significantly limit eligibility. The vast majority of known wrongful convictions involve state offenses, and unless post-conviction litigants are currently incarcerated, like robbery, were much less common); id. at 12 (stating that DNA is not present at the scenes of most crimes but has been present at the scenes of rapes); id. at 263 (stating that DNA testing is typically performed in rape cases, and DNA exonerations are usually rape and rape-murder cases); id. at 271 (explaining that DNA testing is not usually possible in cases involving crimes like robbery); DNA Exonerations Database, supra note 30 (filter by “Trial Info;” then filter by “Types of Evidence at Trial;” then filter by “Forensic Evidence”) (showing that forensic evidence was present at trial in 253 (72%) of 350 DNA exonerations). DNA, however, was not present in either the three federal murder wrongful conviction cases or the five federal sexual assault wrongful conviction cases. Exonerations in the United States, supra note 27 (select “Federal” next to “Fed/Non-Fed” to filter for federal cases; then select “Present” next to “DNA” to filter for cases involving DNA); Profile of Eric Smith, supra. In that case, on September 28, 2012, a military jury convicted a United States Army physician, Major Eric Smith, of a drug crime after he failed a drug test. Profile of Eric Smith, supra. Smith’s urine had tested positive for cocaine, although his hair follicle test was negative for cocaine. Id. At trial, Smith’s attorney argued that the urine sample must have been contaminated, but failed to provide the proper foundation for the admission of the hair follicle test, and the judge excluded that test. Id. In 2014, Smith filed a motion to vacate his conviction. Id. Smith obtained DNA testing, and the results showed that there were two DNA profiles—Smith’s DNA profile and the DNA profile of an unidentified male—in the urine sample. Id. In 2015, the U.S. Army Court of Criminal Appeals vacated Smith’s conviction based on Smith’s attorney’s failure to admit the hair follicle test. Id. The court’s decision did not refer to the DNA testing at all. Id.

See 18 U.S.C. § 3600(a); Exonerations in the United States, supra note 27 (select “Federal” next to “Fed/Non-Fed” to filter for federal cases); supra notes 191–196 and accompanying text. See Profile of Eric Smith, NAT’L REGISTRY OF EXONERATIONS, https://www.law.umich.edu/special/exoneration/Pages/casedetail.aspx?caseid=4742 [https://perma.cc/3V6Z-EQMN] (explaining that Eric Smith was exonerated for ineffective assistance of counsel, not based on DNA evidence). The one federal wrongful conviction case where DNA was present was a drug conviction where the exoneration was not based on DNA testing. Exonerations in the United States, supra note 27 (select “Federal” next to “Fed/Non-Fed” to filter for federal cases; then select “Present” next to “DNA” to filter for cases involving DNA). See 18 U.S.C. § 3600(a) (enumerating limitations on eligibility). For example, in Harris v. Wolfenbarger, the United States District Court for the Eastern District of Michigan held that the petitioner, who was incarcerated for a state conviction, was not eligible for relief under § 3600 because it allows only federal prisoners to move for post-conviction DNA testing. Harris, 2012 U.S. Dist. LEXIS 114781 at *1–2. Similarly, in Pickett v. Sacramento Superior Court in 2011, the United States District Court for the Eastern District of California noted that because the plaintiff was convicted of and imprisoned for state convictions only, not a federal offense, he was not eligible for post-conviction DNA testing under § 3600. No. 2:11-cv-2321 JFM (PC), 2011 WL 6754011, at *2 (E.D. Cal. Dec. 23, 2011).
cerated for federal offenses, they cannot move for DNA testing or a DNA database search under § 3600. 199

2. DNA Database Searches

Congress added subsection (e), which provides for DNA database searches, to § 3600 in the 2016 amendment. 200 Under § 3600(e), if post-conviction DNA testing excludes the applicant as a contributor to the crime-scene DNA profile, then the court must order a search of NDIS. 201 The law enforcement agency conducting the search must submit the crime-scene DNA profile for inclusion in NDIS, and it must compare the crime-scene DNA profile against both DNA profiles of known individuals and DNA profiles from unsolved crimes. 202 An NDIS search is comprehensive in the sense that all fifty states and federal law enforcement agencies contribute DNA profiles to this database. 203 The federal statute, however, specifically requires that the crime-scene DNA profile meet the FBI’s requirements for uploading a profile to NDIS, and thus, the statute does not provide the opportunity for keyboard searches of partial crime-scene DNA profiles. 204

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199 See 18 U.S.C. § 3600(a) (restricting applicants to prisoners incarcerated for federal crimes); Exonerations in the United States, supra note 27 (select “Non-Federal” next to “Fed/Non-Fed” to filter for state cases) (showing that most exonerations are for state crimes). There is no shortage of examples of courts refusing post-conviction DNA testing to state prisoners under § 3600. See, e.g., Harris, 2012 U.S. Dist. LEXIS 114781 at *1–2 (holding that the petitioner was not eligible for relief under § 3600 because he was incarcerated for a state conviction only, and not sentenced for a federal offense); Pickett, 2011 WL 6754011 at *2 (“Because plaintiff is in custody only for state law convictions, and has not been sentenced for a federal offense, plaintiff cannot move for DNA testing under 18 U.S.C. § 3600.”); Sartain, 401 P.3d at 704 (denying the plaintiff’s request for DNA testing under § 3600 because he was not imprisoned for a federal offense “his state conviction was [not] used to enhance a federal sentence”).


201 18 U.S.C. § 3600(e)(B)(i)–(ii) (Supp. IV 2016). Like the North Carolina, Maryland, and Texas statutes, the federal statute makes the DNA database search mandatory, rather than at the court’s discretion, if the post-conviction litigant meets the statute’s criteria. See 18 U.S.C. § 3600(e)(B)(i)–(ii); MD. CODE ANN., CRIM. PROC. § 8-201(d)(2) (West 2017); N.C. GEN. STAT. § 15A-269(a) (2017); TEX. CODE CRIM. PROC. ANN. art. 64.035 (West 2017).

202 18 U.S.C. § 3600(e)(B)(i)–(ii); see NDIS MANUAL, supra note 21, at 37 (describing the criteria for submission of a DNA profile to NDIS).

203 See CODIS – NDIS Statistics, supra note 89 (stating that, as of December 2018, NDIS contained the DNA profiles of more than 13,566,716 offenders and more than 3,323,611 arrestees); Combined DNA Index System (CODIS), supra note 82 (stating that more than 190 law enforcement agencies participate in the FBI’s DNA database program).

204 See 18 U.S.C. § 3600(e)(B)(i)–(ii). The statute specifically states that the DNA profile obtained from the crime must meet the FBI’s requirements for uploading a profile to NDIS. Id. § 3600(e)(B)(i). To upload a profile to NDIS, the profile must be sufficiently complete, and when a manual keyboard search is performed, that partial profile is not uploaded to NDIS. NDIS MANUAL, supra note 21, at 39, 50. Similarly, it appears that the Illinois, North Carolina, and Ohio statutes do not allow for manual keyboard searches of partial DNA profiles either. See 725 ILL. COMP. STAT.
III. RECOMMENDATIONS FOR IMPROVING STATE AND FEDERAL POST-CONVICTION DNA TESTING STATUTES TO INCREASE POST-CONVICTION LITIGANTS’ ACCESS TO DNA DATABASE SEARCHES

All state legislatures should amend their states’ post-conviction DNA testing statutes to allow post-conviction litigants access to DNA database searches.205 The Illinois, North Carolina, and Ohio statutes providing post-conviction litigants access to DNA database searches can serve as examples for other states to follow.206 Alternatively, if states do not provide post-conviction litigants access to DNA database searches, Congress should address this problem by amending the federal post-conviction DNA testing statute—18 U.S.C. § 3600.207 Congress should add a provision to § 3600 allowing some applicants wrongfully convicted of state offenses who have obtained exculpatory DNA testing the opportunity to search NDIS under this statute.208

ANN. 5/116-5(a)–(d) (West 2017); N.C. GEN. STAT. § 15A-269(a)–(b); OHIO REV. CODE ANN. § 2953.74(E) (West 2017); supra notes 150–159 and accompanying text (analyzing the Illinois DNA database search statute); supra notes 160–168 and accompanying text (analyzing the North Carolina DNA database search statute); supra notes 169–181 and accompanying text (analyzing the Ohio DNA database search statute).

205 See Kreag, supra note 8, at 808–09 (explaining that, in the absence of state statutes granting post-conviction litigants access to DNA database searches, access is left up to the discretion of the law enforcement agencies that maintain the databases); id. at 817–18 (explaining why some wrongfully convicted post-conviction litigants need access to DNA database searches to prove their innocence); Access to Post-Conviction DNA Testing, supra note 137 (recommending that all state post-conviction DNA testing statutes provide post-conviction litigants access to DNA database searches); see, e.g., supra notes 1–26 and accompanying text (describing the case of Michael Morton); supra note 140 (describing the case of Jeffrey Deskovic).

206 See 725 ILL. COMP. STAT. ANN. 5/116-5 (West 2017); N.C. GEN. STAT. § 15A-269 (2017); OHIO REV. CODE ANN. § 2953.74(E) (West 2017); Kreag, supra note 8, at 817–18 (explaining why some wrongfully convicted post-conviction litigants need access to DNA database searches to prove their innocence); Access to Post-Conviction DNA Testing, supra note 137 (recommending that all state post-conviction DNA testing statutes provide post-conviction litigants access to DNA database searches); supra notes 150–159 and accompanying text (analyzing the Illinois DNA database search statute); supra notes 160–168 and accompanying text (analyzing the North Carolina DNA database search statute); supra notes 169–181 and accompanying text (analyzing the Ohio DNA database search statute).

207 See 18 U.S.C. § 3600(a), (e) (Supp. IV 2016); Justice for All Reauthorization Act of 2016, Pub. L. No. 114-324, § 11(a), 130 Stat. 1956 (2016) (stating that the purpose of the JFARA, which amended the federal post-conviction DNA testing statute, was to provide post-conviction DNA testing to exonerate innocent individuals); Justice for All Act of 2004, Justice for All Act of 2004, Pub. L. No. 108-405, Title IV, § 411(a)(1), 118 Stat. 2260 (2004) (stating that one of the purposes of the JFAA was “to provide post-conviction testing of DNA evidence to exonerate the innocent”); Kreag, supra note 8, at 808–09 (explaining why some wrongfully convicted post-conviction litigants need access to DNA database searches to prove their innocence).

208 See 18 U.S.C. § 3600(a), (e); Justice for All Reauthorization Act of 2016 § 11(a) (describing the Act’s purpose as providing post-conviction DNA testing to exonerate innocent individuals, without specific mention of any limitation to individuals wrongfully convicted of federal offenses); Justice for All Act of 2004, Title IV § 411(a)(1) (listing one of the JFAA’s purposes as exonerating innocent individuals, without specific mention of any limitation to individuals wrongfully convicted of federal
This Part argues for improvements to state post-conviction DNA testing statutes or to the federal post-conviction DNA testing statute to provide greater access to DNA database searches. Section A argues that all state legislatures should amend their states’ post-conviction DNA testing statutes to include DNA database search provisions comprised of the best features of the Illinois, North Carolina, and Ohio statutes. Section B argues, alternatively, that Congress should amend the federal post-conviction DNA testing statute to provide DNA database searches to a greater number of post-conviction litigants with state offenses who have exhausted their state remedies.

A. All States Legislatures Should Use Illinois, North Carolina, and Ohio as Models and Amend Their States’ Post-Conviction DNA Testing Statutes to Provide for DNA Database Searches

Most known wrongful convictions involve state, not federal, offenses. Moreover, DNA evidence is typically only present in certain types of cases, usually murder and rape cases, and individuals wrongfully convicted of these crimes tend to have been convicted under state, not federal, statutes. In some of these cases, searching a DNA database is necessary to prove innocence.

offenses, through post-conviction DNA testing); Kreag, supra note 8, at 808–09 (explaining that some wrongfully convicted post-conviction litigants need access to DNA database searches to prove their innocence, and that most states do not have statutes providing this relief); supra notes 138–149 and accompanying text (explaining that some post-conviction litigants need access to DNA database searches to prove their innocence, and that, if a state statute does not provide this access, law enforcement has discretion to choose to provide access or not).

See infra notes 212–236 and accompanying text.

See infra notes 212–229 and accompanying text.

See infra notes 230–236 and accompanying text.

See NATIONAL REGISTRY OF EXONERATIONS INTERACTIVE DATA DISPLAY, supra note 27 (select “Federal” next to “Fed/Non-Fed” to filter for federal cases) (showing that, as of December 20, 2018, out of the 2,360 exonerations since 1989, only 111 (4.7%) were for federal crimes).

See GARRETT, supra note 28, at 5 (explaining that, out of the first 250 DNA exonerations, the most common crimes were rape, rape-murder, and murder, while other crimes, like robbery, were much less common), id. at 12 (stating that DNA is not present at the scenes of most crimes but has been present at the scenes of rapes), id. at 271 (explaining that DNA testing is not possible in cases involving crimes like robbery because the perpetrator does not typically leave any biological material at the crime scene); Exonerations in the United States, supra note 27 (select “Murder” under “Crime” to filter for murder cases; then select “Non-Federal” next to “Fed/Non-Fed” to filter for state murder cases) (select “Sexual Assault” under “Crime” to filter for sexual assault cases; then select “Non-Federal” next to “Fed/Non-Fed” to filter for state sexual assault cases) (showing that 99.6% of known wrongful convictions for murder were state prosecutions, and that 98.4% of known wrongful convictions for sexual assault were state prosecutions).

See Garrett, supra note 142, at 1659 (explaining that, in some cases, despite exculpatory DNA testing results, the prosecution did not admit that the defendant was innocent until a DNA database search identified the actual perpetrator); Kreag, supra note 8, at 817–18 (explaining why some wrongfully convicted post-conviction litigants need to search DNA databases in order to identify the actual perpetrators of the crimes they were wrongfully convicted of and prove their innocence).
Only nine states, however, have enacted statutes granting post-conviction litigants access to DNA database searches. The federal post-conviction DNA testing statute provides an avenue for relief for some applicants convicted of state offenses. Only applicants who are currently imprisoned for a federal offense and request DNA testing of evidence that was admitted during a federal sentencing hearing, however, qualify for post-conviction DNA testing and a DNA database search under the federal statute. Thus, to provide greater access to DNA database searches to wrongfully convicted individuals, all state legislatures should amend post-conviction DNA testing statutes to include the specific DNA database search provisions discussed below.

First, to ensure that trial courts grant DNA database searches consistently, state statutes should follow North Carolina’s model and mandate that trial courts grant DNA database searches whenever the applicant meets the appropriate criteria. Under the North Carolina model, the statute enumerates five database searches to prove their innocence); see, e.g., supra notes 1–26 and accompanying text (describing the case of Michael Morton); supra note 140 (describing the case of Jeffrey Deskovic); supra note 142 (listing other wrongful conviction cases where exonerees needed access to DNA database searches to prove their innocence).

See 18 U.S.C. § 3600(a); see also Harris v. Wolfenbarger, No. 2:05-CV-74316, 2012 U.S. Dist. LEXIS 114781, at *1–2 (E.D. Mich. Aug. 15, 2012) (holding that the petitioner was not eligible for relief under § 3600 because he was incarcerated for a state conviction only, and not sentenced for a federal offense); Pickett v. Sacramento Superior Court, No. 2:11-cv-2321 JFM (PC), 2011 WL 6754011, at *2 (E.D. Cal. Dec. 23, 2011) (denying the plaintiff’s motion for post-conviction DNA testing under § 3600 because he was sentenced for state convictions only); Sartain v. State, 401 P.3d 701, 704 (Mont. 2017) (denying the plaintiff’s request for DNA testing under § 3600 because he was not imprisoned for a federal offense and “his state conviction was [not] used to enhance a federal sentence”).

See Garrett, supra note 142, at 1659 (explaining that, in some cases, despite exculpatory DNA testing results, the prosecution did not admit that the defendant was innocent until a DNA database search identified the actual perpetrator); Kreag, supra note 8, at 808–09, 817–18 (explaining that some post-conviction litigants need access to DNA database searches, but that only nine states have statutes providing post-conviction litigants with this access).

See Garrett, supra note 142, at 1659 (explaining that, in some cases, despite exculpatory DNA testing results, the prosecution did not admit that the defendant was innocent until a DNA database search identified the actual perpetrator); Kreag, supra note 8, at 808–09, 817–18 (explaining that some post-conviction litigants need access to DNA database searches, but that only nine states have statutes providing post-conviction litigants with this access).
requirements, and if all five requirements are met, the court must grant both DNA testing and a DNA database search.220 This model may be the easiest for a state legislature to implement because it requires only amending the state’s existing post-conviction DNA testing statute to include a mandatory DNA database search whenever DNA testing is granted, rather than having to create a new statute or a separate set of requirements for a DNA database search.221

Second, to increase the possibility of identifying the actual perpetrator, a DNA database search should compare the crime-scene DNA profile against as many DNA profiles as possible.222 Like Illinois, all states should allow post-conviction litigants to search both state and local DNA databases as well as NDIS.223 Additionally, like Illinois, all states should require that any DNA database search compare the crime-scene DNA profile against both DNA profiles

220 N.C. GEN. STAT. § 15A-269(a)–(b); see supra notes 160–168 and accompanying text (analyzing the North Carolina DNA database search statute).

221 See N.C. GEN. STAT. § 15A-269(a)–(b) (setting forth a single set of requirements to receive both DNA testing and a database search). If state legislatures choose not to follow the North Carolina model, and prefer to create a new DNA database search statute separate from the post-conviction DNA testing statute, Illinois is an alternative model. See 725 ILL. COMP. STAT. ANN. 5/116-5. Following the Illinois model, state legislatures could create new statutes that provide DNA database searches to both pre-trial defendants and post-conviction litigants. See id.

222 See 725 ILL. COMP. STAT. ANN. 5/116-5; Kreag, supra note 8, at 816 (explaining that comparing a crime-scene DNA profile against another crime-scene profile in the database and performing a keyboard search can both identify the actual perpetrator of a crime). Because performing a DNA database search is neither time-consuming nor expensive, performing a search that compares the crime-scene DNA profile against more DNA profiles in a DNA database should not require significant additional time or expense. See NDIS MANUAL, supra note 21, at 50 (describing keyboard searches); Kreag, supra note 8, at 820 (noting that keyboard searches are not much more difficult or burdensome than adding a DNA profile to the database).

223 See 725 ILL. COMP. STAT. ANN. 5/116-5(a)–(b); Kreag, supra note 8, at 807 n.2 (advocating for post-conviction litigants’ access to all DNA databases). States should allow post-conviction litigants to search NDIS as long as the appropriate NDIS criteria are met. See 18 U.S.C. § 3600(e); 725 ILL. COMP. STAT. ANN. 5/116-5(b); NDIS MANUAL, supra note 21, at 39 (stating that the requirements to search a DNA profile in NDIS include that the DNA testing was performed using an approved kit and that the DNA profile is sufficiently complete); Kreag, supra note 8, at 817–18 (explaining the importance of database access in exonerating wrongfully convicted litigants).
of known offenders and DNA profiles from unsolved crimes. Each statute should specifically enumerate these requirements and also include language providing access to keyboard searches to avoid the ambiguity present in the Illinois, North Carolina, and Ohio statutes.

Lastly, states should use the Ohio statute as a model to provide instructions for the law enforcement agency conducting the search because this statute provides the most detailed instructions. Like Ohio, states should specify in their statutes which law enforcement agency is responsible for conducting the search so that there is no ambiguity that an agency could use to argue that it does not need to perform the search. States should also follow Ohio’s example and direct law enforcement agencies to take specific steps in response to the DNA database search results to increase the likelihood of identifying the actual perpetrator. State statutes should also require the law enforcement agency to provide copies of all documentation related to the DNA database search to the post-conviction litigant, like Illinois requires, so that the litigant can use that information to continue investigating or prove his or her innocence.

B. Congress Should Amend the Federal Post-Conviction DNA Testing Statute to Allow Greater Access to DNA Database Searches for Post-Conviction Litigants Wrongfully Convicted of State Offenses

Alternatively, if state legislatures do not amend their states’ post-conviction DNA testing statutes as this Note proposes, Congress should amend the federal post-conviction DNA testing statute to provide database searches to

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224 See 725 ILL. COMP. STAT. ANN. 5/116-5(a); Kreag, supra note 8, at 815–16 (explaining searches against known-offender and crime-scene DNA profiles), 817–18 (explaining why post-conviction litigants need access to search DNA databases). It is important that the DNA database search compares the crime-scene DNA profile against DNA profiles from unsolved crimes because this type of search has the potential to identify a serial offender. See Kreag, supra note 8, at 816 & n.52. Even though the serial offender’s identity will be unknown, traditional investigation has the potential to identify the offender, and linking the offender to multiple crimes could help the investigation. See id.

225 See 725 ILL. COMP. STAT. ANN. 5/116-5(a)–(d); N.C. GEN. STAT. § 15A-269(a)–(b); OHIO REV. CODE ANN. § 2953.74(E); NDIS MANUAL, supra note 21, at 50 (describing keyboard searches); Kreag, supra note 8, at 816, 820 (explaining that keyboard searches are not a significant burden). In contrast, the federal statute makes it clear that it does not allow for keyboard searches. See 18 U.S.C. § 3600(e) (requiring that the crime-scene DNA profile meet the FBI’s requirements for uploading a profile to NDIS); NDIS MANUAL, supra note 21, at 50; Kreag, supra note 8, at 816.

226 See OHIO REV. CODE ANN. § 2953.74(E); supra notes 169–181 and accompanying text (analyzing the Ohio DNA database search statute).

227 See OHIO REV. CODE ANN. § 2953.74(E); supra notes 169–181 and accompanying text (analyzing the Ohio DNA database search statute).

228 See OHIO REV. CODE ANN. § 2953.74(E); supra notes 169–181 and accompanying text (analyzing the Ohio DNA database search statute).

229 See 725 ILL. COMP. STAT. ANN. 5/116-5(c); supra notes 150–159 and accompanying text (analyzing the Illinois DNA database search statute).
a greater number of applicants convicted of state offenses. Currently, few individuals wrongfully convicted of state offenses are eligible for relief under § 3600 because the statute requires that applicants are incarcerated for federal offenses and that evidence of the state offense was admitted at a federal sentencing hearing.

To increase access to DNA database searches, Congress should amend § 3600 to include a new provision that provides an NDIS search for post-conviction litigants who have already obtained exculpatory DNA testing results under a state statute. As a practical matter, DNA testing must be completed prior to the post-conviction litigant seeking relief under § 3600 so that there is a crime-scene profile ready to search in NDIS. To limit the number

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230 See 18 U.S.C. § 3600(a), (e); Justice for All Reauthorization Act of 2016 § 11(a) (stating that the purpose of the JFARA, which amended the federal post-conviction DNA testing statute to add the DNA database search provision, was to provide DNA testing to exonerate innocent individuals who have been wrongfully convicted); Justice for All Act of 2004, Title IV § 401 (stating that one of the purposes of the JFAA was “to provide post-conviction testing of DNA evidence to exonerate the innocent”). Congress amended the federal statute because legislators want there to be more exonerations. Justice for All Reauthorization Act of 2016 § 11(a); Justice for All Act of 2004, Title IV § 401. Greater availability of DNA database searches will lead to more exonerations. See Dist. Attorney’s Office for the Third Judicial Dist. v. Osborne, 557 U.S. 52, 55 (2009) (“DNA . . . has an unparalleled ability both to exonerate the wrongly convicted and to identify the guilty.”); Kreag, supra note 8, at 825 (explaining that a lack of access to a DNA database search delayed Jeffrey Deskovic’s exoneration by several years). Therefore, Congress should amend the statute to make DNA database searches available to more post-conviction litigants to increase exonerations. See Justice for All Reauthorization Act of 2016 § 11(a); Justice for All Act of 2004, Title IV § 401.

231 See 18 U.S.C. § 3600(a), (e); see, e.g., Harris, 2012 U.S. Dist. LEXIS 114781 at *1–2 (denying a petitioner incarcerated for a state conviction relief under § 3600); Pickett, 2011 WL 6754011 at *2 (denying a plaintiff sentenced for state convictions relief under § 3600); Sartain, 401 P.3d at 704 (denying a plaintiff relief under § 3600 because “his state conviction was [not] used to enhance a federal sentence”); supra notes 187–199 and accompanying text (discussing the eligibility criteria under the federal post-conviction DNA testing statute).

232 See 18 U.S.C. § 3600(a), (e); NDIS MANUAL, supra note 21, at 27 (explaining that a search of NDIS requires a DNA profile); Garrett, supra note 142, at 1659 (explaining that, in some cases, despite exculpatory DNA testing results, the prosecution did not admit that the defendant was innocent until a DNA database search identified the actual perpetrator); Kreag, supra note 8, at 808–09 (explaining why DNA database searches are sometimes necessary to prove innocence); David A. Schumacher, Comment, Post-Conviction Access to DNA Testing: The Federal Government Does Not Offer an Adequate Solution, Leaving the States to Remedy the Situation, 57 CATH. U. L. REV. 1245, 1260, 1268, 1271 (2008) (arguing that Congress should amend § 3600, also called the Innocence Protection Act (“IPA”), because its eligibility criteria are too strict, and because the Act should be available to not only petitioners convicted of federal offenses but also petitioners convicted of state offenses); Steinback, supra note 73, at 342–43 (describing compromises in the IPA, and arguing that the Act’s eligibility criteria are too restrictive because compromises eliminated a Fourteenth Amendment due process right to post-conviction DNA testing for petitioners convicted of state offenses). See generally Ronald Weich, The Innocence Protection Act of 2004: A Small Step Forward and a Framework for Larger Reforms, CHAMPION, Mar. 2005, at 28 (explaining compromises that Congress made in the IPA, and arguing that the law could be improved further).

233 NDIS MANUAL, supra note 21, at 27 (explaining that a search of NDIS requires a DNA profile).
of eligible petitioners and avoid imposing a significant burden on the database administrators who perform the searches, Congress should restrict relief to only post-conviction litigants who have already sought a search via another avenue, such as making a request to a law enforcement agency or seeking a court order for a search, and been denied a search. If the applicant were to meet these two criteria—exculpatory results and denial of a search—then the federal district court would be required to order a search of NDIS, where the crime-scene DNA profile would be compared against both profiles of known offenders and profiles recovered from unsolved crimes so that the crime-scene profile is compared against as many profiles as possible.

Congress should also amend § 3600 to allow for keyboard searches of partial crime-scene DNA profiles. Keyboard searches do not burden the database administrators who conduct the searches, and they can help exonerate wrongfully convicted individuals, so the benefits outweigh the costs. It is quick and easy for administrators to perform DNA database searches, but these searches can be profoundly life-changing for exonerees like Michael Morton who cannot prove their innocence without them. By amending § 3600 to provide DNA database searches, Congress can remedy even more wrongful convictions, furthering the goal that Congress intended for this statute to accomplish.

CONCLUSION

Although forensic science is regularly used in criminal cases, the recent NAS Report highlights that several forensic science techniques, including the forensic feature-comparison methods, are unreliable and not scientifically valid.

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234 See 18 U.S.C. § 3600(a), (e); Kreag, supra note 8, at 808, 818–19 (explaining that nine states have statutes providing post-conviction litigants access to DNA database searches, and that, in a state without a statute, a defendants might ask the prosecutor to join his or her petition to the court for a database search).

235 See 18 U.S.C. § 3600(a), (e); Kreag, supra note 8, at 815–16 (describing types of DNA database searches).

236 See 18 U.S.C. § 3600(a), (e); NDIS MANUAL, supra note 21, at 50 (describing keyboard searches); Kreag, supra note 8, at 820 (explaining that keyboard searches are not a significant burden); Schumacher, supra note 232, at 1260, 1268, 1271 (arguing that Congress should amend § 3600).

237 See Kreag, supra note 8, at 820 (explaining that keyboard searches are not a significant burden, and that keyboard searches can identify potential perpetrators that the prosecution and defense can then investigate further).

238 See id. (describing the value of keyboard searches); supra notes 1–26 and accompanying text (describing the case of Michael Morton, who was wrongfully convicted of murdering his wife and obtained exculpatory post-conviction DNA testing but was not exonerated until a DNA database search identified the actual perpetrator).

239 See 18 U.S.C. § 3600(a), (e); Justice for All Reauthorization Act of 2016 § 11(a) (stating that the purpose of the JFARA was to provide DNA testing to exonerate innocent individuals who have been wrongfully convicted); Justice for All Act of 2004, Title IV § 401 (describing one of the purposes of the JFAA as exonerating innocent individuals through post-conviction DNA testing).
These flawed forensic science methods have contributed to hundreds of wrongful convictions. As DNA testing has advanced, however, it has become an important resource that can establish innocence and exonerate wrongfully convicted individuals. Despite the value of DNA testing, in some wrongful conviction cases, exculpatory DNA testing results alone have not been sufficient to prove innocence. Rather, some exonerees have had to prove their innocence by searching law enforcement DNA databases to identify the actual perpetrators of the crimes for which they were wrongfully convicted.

Even though all fifty states have enacted post-conviction DNA testing statutes, only nine states and the federal post-conviction DNA testing statute provide post-conviction litigants with access to search DNA databases. Additionally, only applicants currently incarcerated for federal offenses are eligible for relief under the federal statute. Therefore, state legislatures or Congress should expand access to DNA database searches in order to remedy wrongful convictions. All state legislatures should amend their post-conviction DNA testing statutes to grant post-conviction litigants access to DNA database searches. Alternatively, Congress should amend the federal post-conviction DNA testing statute to provide post-conviction litigants wrongly convicted of state offenses with access to DNA database searches under the federal statute.

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