



CSU
College of Law Library

Cleveland State Law Review

Volume 69 | Issue 1

Note

11-30-2020

No Longer Innocent Until Proven Guilty: How Ohio Violates the Fourth Amendment Through Familial DNA Searches of Felony Arrestees

Jordan Mason
Cleveland-Marshall College of Law

Follow this and additional works at: <https://engagedscholarship.csuohio.edu/clevstrev>



Part of the [Criminal Law Commons](#), [Evidence Commons](#), [Fourth Amendment Commons](#), [Science and Technology Law Commons](#), and the [Supreme Court of the United States Commons](#)

[How does access to this work benefit you? Let us know!](#)

Recommended Citation

Jordan Mason, *No Longer Innocent Until Proven Guilty: How Ohio Violates the Fourth Amendment Through Familial DNA Searches of Felony Arrestees*, 69 *Clev. St. L. Rev.* 195 (2020)
available at <https://engagedscholarship.csuohio.edu/clevstrev/vol69/iss1/10>

This Note is brought to you for free and open access by the Journals at EngagedScholarship@CSU. It has been accepted for inclusion in Cleveland State Law Review by an authorized editor of EngagedScholarship@CSU. For more information, please contact library.es@csuohio.edu.

NO LONGER INNOCENT UNTIL PROVEN GUILTY: HOW OHIO VIOLATES THE FOURTH AMENDMENT THROUGH FAMILIAL DNA SEARCHES OF FELONY ARRESTEES

JORDAN MASON*

ABSTRACT

In 2013, the United States Supreme Court legalized DNA collection of all felony arrestees upon arrest through its decision in *Maryland v. King*. Since then, the State of Ohio has broadened the use of arrestee DNA by subjecting it to familial DNA searches. Ohio's practice of conducting familial DNA searches of arrestee DNA violates the Fourth Amendment because arrestees have a reasonable expectation of privacy in the information that is extracted from a familial DNA search and it fails both the totality of the circumstances and the special needs tests. Further, these tests go against the intention of the Supreme Court when it legalized arrestee DNA collection as it specifically precluded the use of arrestee DNA collection in its *Maryland v. King* decision.

CONTENTS

I.	INTRODUCTION	186
II.	BACKGROUND OF FAMILIAL DNA AND ARRESTEE DNA COLLECTION STATUTES	188
	A. <i>Evolution of DNA in Criminal Investigations</i>	189
	1. Introduction of DNA to Criminal Investigations.....	190
	2. CODIS Databank.....	192
	3. Expansion of DNA Collection to Familial DNA Searches	193
	B. <i>Fourth Amendment Challenges to DNA Collection of Arrestees</i>	195
	1. Fourth Amendment Analysis.....	195
	2. <i>United States v. Mitchell</i> : One of the First Cases to Conduct a Fourth Amendment Analysis of Arrestee DNA Collection	197

* J.D. expected, Cleveland-Marshall College of Law, May 2021. I extend my sincerest gratitude to all those who provided guidance and feedback throughout the research and process including Professor Patricia Falk, Margaret Sweeney, and the *Cleveland State Law Review*. A special thank you to my parents, Bill and Carol Mason, for their endless support and encouragement.

3.	<i>Maryland v. King: The Supreme Court’s Fourth Amendment Assessment of Arrestee DNA Collection</i>	198
III.	WHY FAMILIAL SEARCHES OF ARRESTEE DNA PROFILES ARE UNCONSTITUTIONAL.....	199
A.	<i>Familial DNA Searches Conduct a Third Unlawful Search That Violates the Fourth Amendment</i>	200
1.	Arrestees Have a Reasonable Expectation of Privacy in Familial DNA	201
2.	Application of the Totality of the Circumstances Test.....	204
3.	Application of the Special Needs Doctrine	208
B.	<i>Cases Upholding Arrestee DNA Collection Specifically Precluded Arrestee DNA from Familial DNA Searches</i>	210
C.	<i>Ohio’s Expungement Process Opens the Door to Familial DNA Searches After Acquittal</i>	214
IV.	CONCLUSION.....	217

I. INTRODUCTION

In August of 2017, Leon Edwards was arrested for attempted murder, felonious assault, and other charges stemming from a road-rage inspired shooting in Cleveland, Ohio.¹ After a year of incarceration,² Edwards finally was able to take his case to trial.³ At the close of the evidence, the jury deliberated for less than three hours before returning with not guilty verdicts, acquitting Edwards of all charges.⁴ Although Edwards was found not guilty, it is likely he was unaware that his DNA would remain in the State’s possession and that it would be used to subject him and his blood relatives to searches of future criminal activity.

This is because Ohio is one of twelve states in the country to conduct familial DNA searches.⁵ A familial DNA search occurs when law enforcement officers obtain a DNA sample from an arrestee upon booking and use that sample to create a DNA

¹ Corey Shaffer, *Trial in Road-Rage Shooting of Child Nearly Derailed After Co-Defendant Reneges on Plea Deal and Refuses to Testify*, CLEVELAND.COM, https://www.cleveland.com/court-justice/2018/08/trial_in_road-rage_shooting_of_1.html (last updated Jan. 30, 2019).

² Corey Shaffer, *Cleveland Man Found Not Guilty in Road-Rage Shooting of Child*, CLEVELAND.COM, https://www.cleveland.com/court-justice/2018/08/cleveland_man_found_not_guilty_1.html (last updated Jan. 30, 2019).

³ *Id.*

⁴ *Id.*

⁵ Allison Murray et al., *Familial DNA Testing: Current Practices and Recommendations for Implementation*, 9 INVESTIGATIVE SCI. J. 1, 1 (2017).

profile of the individual in one of the State's DNA databases.⁶ After creating the DNA profile, law enforcement agencies are able to compare that profile with DNA evidence left at a crime scene.⁷ If the crime scene evidence does not respond with a direct "hit" to a DNA profile already in the database, officers are able to run another search of the system looking for profiles that partially match the crime scene DNA.⁸ A profile that results from this search is not the true suspect of the crime because the profile does not completely match the sample.⁹ However, the profile may inform law enforcement officers that the true suspect of the crime is someone who shares DNA with the person who has the DNA profile – a family member.¹⁰

In 2016, the Ohio Attorney General implemented familial DNA searching in criminal investigations by producing a twelve-page protocol outlining the State's procedure for conducting such searches.¹¹ The protocol outlines that the database is used for cases which are "[v]iolent, causing serious injury or death; or which demonstrate a continuing threat of imminent and serious harm to one or more members of the community; and [n]ot solvable by traditional methods of criminal investigation."¹² The protocol also provides that searches are conducted on DNA profiles that are currently located in Combined DNA Index System ("CODIS"), which is the country's national DNA database.¹³ Additionally, familial searches are strictly performed on males because the tests can only be performed on the Y chromosome,¹⁴ which is located solely in the male body.¹⁵

Ohio's CODIS DNA databank includes DNA profiles from individuals who have been arrested for a crime that they have not yet, if ever, been proven guilty of committing. After there has been an arrest of an individual suspected of committing a felony, the State takes a DNA sample from the felony arrestee and uses that sample to create a profile of them.¹⁶ Ohio Revised Code Section 2901.07(a) authorizes the

⁶ Sara Debus-Sherrill & Michael B. Field, *Understanding Familial DNA Searching*, NAT'L CRIM. JUST. REFERENCE SERV., Aug. 2017, at 2, 3.

⁷ *Id.* at 2.

⁸ *Id.* at 3.

⁹ *Id.*

¹⁰ *Id.*

¹¹ OHIO BUREAU OF CRIM. INVESTIGATION CRIME LAB., FAMILIAL SEARCH POLICY AND PROCEDURES (2016) [hereinafter BCI FAMILIAL SEARCH].

¹² *Id.* at 3.

¹³ *Id.* at 3–4.

¹⁴ *Id.* at 2.

¹⁵ *Y Chromosome*, MEDLINEPLUS (Aug. 17, 2020), <https://ghr.nlm.nih.gov/chromosome/Y>.

¹⁶ OHIO REV. CODE ANN. § 2901.07(a) (2020); *CODIS Unit*, OHIO ATT'Y GEN., <https://www.ohioattorneygeneral.gov/Law-Enforcement/Bureau-of-Criminal-Investigation/Laboratory-Division/CODIS-Unit> (last visited Nov. 30, 2019).

aforementioned use of arrestee DNA.¹⁷ Although the constitutionality of felony arrestee DNA statutes similar to Ohio's have been challenged, the United States Supreme Court has upheld the practice.¹⁸ No court within the United States, however, has ruled on the constitutionality of subjecting an arrestee's DNA to an additional familial DNA search.

The concerns with conducting familial DNA searches of arrestee DNA are heightened when looking at Ohio's DNA expungement procedure. The process is ambiguous, leaving it unclear whether or not felony-arrestee DNA is ever removed from CODIS after the arrestee has been acquitted from charges. However, even if Ohio does expunge an individual's DNA after non-conviction, the burden to initiate the process is placed on the individual, and the law provides no time frame within which the State must remove the DNA profile from CODIS. Consequently, Ohio law allows for former arrestees' DNA to remain in CODIS for an indefinite time, even if they have been acquitted of the criminal charges.

This Note argues that Ohio's use of an arrestee's DNA in a CODIS familial DNA search is unconstitutional for the following reasons: arrestees have a reasonable expectation of privacy against familial DNA searches, the searches violate the Fourth Amendment under both the totality of the circumstances and special needs test, the United States Supreme Court specifically precluded familial DNA searches when it legalized arrestee DNA collection statutes, and Ohio's DNA expungement process provides a possibility that individuals may be subject to limitless searches for their entire lives. Part II gives scientific background of DNA, and the history of challenges to arrestee DNA collection statutes. Part II.A provides a background of the evolution of the use of DNA in criminal investigations. Part II.B discusses Fourth Amendment challenges to arrestee DNA collection statutes and the current state of the law. Part III explains why Ohio's use of arrestee DNA in familial searches is unconstitutional. Part III.A discusses how a familial DNA search creates an unlawful search that violates the Fourth Amendment under both the totality of the circumstances test and the special needs doctrine. Part III.B details how the United States Supreme Court did not intend for arrestee DNA to be used in familial DNA searches when it upheld the constitutionality of arrestee DNA collection statutes. Part III.C analyzes Ohio's current DNA expungement process and explains how it allows the state to continue conducting unconstitutional searches even after an individual has been formally acquitted. Finally, Part IV concludes that familial DNA searches of arrestee DNA are unlawful searches under the Fourth Amendment and emphasizes why Ohio must refrain from conducting these searches.

II. BACKGROUND OF FAMILIAL DNA AND ARRESTEE DNA COLLECTION STATUTES

To best understand why Ohio's practice of familial DNA searches of arrestee DNA is a violation of the Fourth Amendment, background information on the evolution of DNA in criminal investigations is helpful. This includes an introduction to the first use of DNA in criminal investigations, an overview of how the CODIS databank works, and how the use of DNA is expanding to familial searches. Equally important

¹⁷ § 2901.07(a).

¹⁸ *Maryland v. King*, 569 U.S. 435, 439 (2013).

is an understanding of a Fourth Amendment analysis and the two main cases that have upheld the constitutionality of arrestee DNA collection statutes.

A. Evolution of DNA in Criminal Investigations

Since the introduction of DNA phenotyping in 1984,¹⁹ DNA has become a vital part of forensic investigations,²⁰ and the use of DNA has rapidly expanded in forensic science all over the world.²¹ With the expansion came an increase in the scope of DNA collection.²² The first authorization of DNA collection came from Congress through the passage of the DNA Analysis Backlog Elimination Act of 2000 (“The DNA Act”).²³ The DNA Act requires law enforcement to obtain DNA from “each individual in the custody of the Bureau of Prisons who is, or has been, convicted of a qualifying Federal offense” and “an individual on probation, parole, or supervised release.”²⁴ In 2009, the scope of the DNA Act dramatically changed when it was amended to require law enforcement to obtain DNA samples from all individuals who are arrested, facing charges, or facing convictions.²⁵

Two years after the federal law was amended, Ohio also broadened its scope of DNA collection by requiring DNA collection from arrestees with the passage of § 2901.07(B)(1)(a) of the Ohio Revised Code.²⁶ Section 2901.07(B)(1)(a) provides: “On and after July 1, 2011, a person who is eighteen years of age or older and who is arrested on or after July 1, 2011, for a felony offense shall submit to a DNA specimen collection procedure administered by the head of the arresting law enforcement agency.”²⁷ After an arrestee’s DNA is collected, the DNA is used to create a profile of the individual.²⁸ The DNA profile is then shared with the Bureau of Criminal Identification and Investigation and added to Ohio’s state DNA database.²⁹

¹⁹ Susan Matheson, *DNA Phenotyping: Snapshot of a Criminal*, 166 CELL 1061, 1061 (2016).

²⁰ Walther Parson, *Age Estimation with DNA: From Forensic DNA Fingerprinting to Forensic (Epi) Genomics: A Mini-Review*, 64 GERONTOLOGY 326, 327 (2018).

²¹ *Id.* at 327–28.

²² *Id.*

²³ See DNA Analysis Backlog Elimination Act of 2000, Pub. L. No. 106-546, § 3(a), 114 Stat. 2726, 2728 (2000) (current version at 34 U.S.C. § 40701).

²⁴ *Id.*

²⁵ 28 C.F.R. § 28.12(b) (2020).

²⁶ OHIO REV. CODE ANN. § 2901.07(B)(1)(a) (2020).

²⁷ *Id.*

²⁸ See *CODIS Unit*, *supra* note 16.

²⁹ *Id.*

Ohio continued to expand its use of DNA in late 2016,³⁰ when it became one of eleven states to implement familial DNA searches in criminal investigations.³¹ The Ohio Attorney General's Office and the Ohio BCI Crime Laboratory laid out its familial search policy and procedures in a twelve-page protocol.³² Shortly thereafter, the state began conducting familial DNA searches and successfully arrested its first suspect.³³ Although familial searches can result in a successful criminal prosecution,³⁴ they also present grave privacy concerns for arrestees and their blood relatives. An understanding of these concerns requires an overview of DNA analysis and its use in criminal investigations, along with an understanding of the CODIS Database.

1. Introduction of DNA to Criminal Investigations

Every cell in the human body contains DNA.³⁵ DNA is found within twenty-three pairs of chromosomes.³⁶ One pair determines the person's sex, while the remaining twenty-two autosomal chromosomes are used to ascertain human identity.³⁷ On each chromosome one strand is contributed from the mother, while the other strand comes from the father.³⁸

The DNA material inside of the chromosomes contain both coding and non-coding regions.³⁹ The coding regions are referred to as genes and contain the necessary information for protein creation.⁴⁰ Genes make up approximately five percent of the human genome.⁴¹ The rest of the chromosomal material is made up of non-coding regions of DNA.⁴² These are referred to as junk DNA.⁴³ Junk DNA houses the genetic information which is used to establish identity because it contains genetic markers

³⁰ See BCI FAMILIAL SEARCH, *supra* note 11.

³¹ Murray et al., *supra* note 5, at 3.

³² See generally BCI FAMILIAL SEARCH, *supra* note 11.

³³ Vicki Anderson-Gregg, *Arrest Made in Westside Abduction Case*, FED. BUREAU OF INVESTIGATION CLEVELAND (Dec. 5, 2016), <https://www.fbi.gov/contact-us/field-offices/cleveland/news/press-releases/arrest-made-in-westside-abduction-case>.

³⁴ *Id.*

³⁵ JOHN M. BUTLER, FORENSIC DNA TYPING: BIOLOGY, TECHNOLOGY, AND GENETICS OF STR MARKERS 22 (2d ed. 2005).

³⁶ *Id.* at 20.

³⁷ *Id.*

³⁸ *Id.* at 23.

³⁹ *Id.* at 22.

⁴⁰ *Id.*

⁴¹ *Id.*

⁴² *Id.*

⁴³ *Id.*

which vary amongst individuals.⁴⁴ The position of a gene or a DNA marker in the non-coding junk DNA region is called a locus.⁴⁵ Each locus has a genetic sequence that contains variable repeats of short sequences of base pairs which are referred to as STRs.⁴⁶ Forensic scientists examine twenty core loci⁴⁷ to establish identity and look for disparity amongst STRs at all twenty markers.⁴⁸ The disparity amongst the number of sequences at every marker establishes a distinctive profile,⁴⁹ allowing for identification of a certain individual.⁵⁰ STR patterns are “highly variable among individuals,” resulting in a minimal chance that they are shared by multiple people.⁵¹

During a criminal investigation, investigators obtain a genetic sample from blood, hair, skin, or other biological matter that was recovered from a crime scene and compare it to an existing DNA sample.⁵² A small number of genetic markers are identified on the sample by using manufactured chemical sequences, known as primers, that attach to similar DNA sequences of interest in the sample.⁵³ A string of primers joined to the DNA enlarges the original specimen and enables a forensic scientist to ascertain if a DNA profile exists.⁵⁴ Forensic scientists then compare the length of loci from two different DNA samples, and if the lengths match at enough points along the chain a genetic match exists, identifying a suspect.⁵⁵

⁴⁴ *Id.*

⁴⁵ *Id.* at 22–23.

⁴⁶ Henry T. Greely et al., *Family Ties: The Use of DNA Offender Databases to Catch Offenders' Kin*, 34 J.L., MED. & ETHICS 248, 249 (2006).

⁴⁷ *Frequently Asked Questions on CODIS and NDIS*, FED. BUREAU OF INVESTIGATION, <https://www.fbi.gov/services/laboratory/biometric-analysis/codis/codis-and-ndis-fact-sheet> (last visited Feb. 17, 2019).

⁴⁸ BUTLER, *supra* note 35, at 116.

⁴⁹ Matheson, *supra* note 19, at 1061.

⁵⁰ *Id.*

⁵¹ BUTLER, *supra* note 35, at 85.

⁵² *Id.* at 34 tbl.3.1 (listing some of the sources of biological materials used for PCR-based DNA typing).

⁵³ *Id.* at 65.

⁵⁴ Samuel Hodge, *Current Controversies in the Use of DNA in Forensic Investigations*, 48 UNIV. BALT. L. REV. 39, 42 (2018).

⁵⁵ Karen Norrgard, *Forensics, DNA Fingerprinting, and CODIS*, SCITABLE (2008), <https://www.nature.com/scitable/topicpage/forensics-dna-fingerprinting-and-codis-736/>.

2. CODIS Databank

Investigators keep DNA profiles of individuals and use them as reference samples to crime scene DNA profiles.⁵⁶ In order to effectively maintain DNA profiles, the Federal Bureau of Investigation created the Combined DNA Index System (“CODIS”) national database.⁵⁷ The term CODIS refers to both the Federal Bureau of Investigation’s program for criminal DNA databases and the software that is used to manage the databases.⁵⁸ Currently, all states and the federal government use CODIS for the storage of DNA profiles.⁵⁹ CODIS allows federal, state, and local law enforcement to identify potential suspects by matching DNA profiles from crime scene evidence to convicted offender and arrestee profiles.⁶⁰ As of September 2020, the national database contained over 14,328,685 offender profiles, 4,117,039 arrestee profiles, and 1,055,090 forensic profiles.⁶¹

CODIS is comprised of local, state, and national databases.⁶² The Local DNA Index System (“LDIS”) is installed in police departments, sheriff’s offices, and state agencies, and the database can be entered to search against other profiles from local cases.⁶³ All forensic DNA records originate at the local level and then flow into the state and national levels.⁶⁴ Each state has a single laboratory that operates a State DNA Index System (“SDIS”), which compares DNA profiles within the state.⁶⁵ SDIS is traditionally run by the agency that maintains the state’s convicted offender DNA database program.⁶⁶ Each state also has its own statute(s) which regulate the types of samples that are submitted to the database.⁶⁷ The National Data Index System (“NDIS”) is the top level of CODIS and contains all DNA records submitted by

⁵⁶ Derek Regensburger, *DNA Databases and the Fourth Amendment: The Time Has Come to Reexamine the Special Needs Exception to the Warrant Requirement and the Primary Purpose Test*, 19 ALB. L.J. SCI. & TECH. 319, 321 (2009).

⁵⁷ *Frequently Asked Questions on CODIS and NDIS*, *supra* note 47.

⁵⁸ *Id.*

⁵⁹ *Id.*

⁶⁰ *Id.*

⁶¹ *CODIS-NDIS Statistics*, FED. BUREAU OF INVESTIGATION, <https://www.fbi.gov/services/laboratory/biometric-analysis/codis/ndis-statistics> (last visited Oct. 22, 2020).

⁶² *Frequently Asked Questions on CODIS and NDIS*, *supra* note 47.

⁶³ See OHIO BUREAU OF CRIM. INVESTIGATION CRIME LAB., OHIO CODIS OPERATING PROCEDURES 4 (2018) [hereinafter OHIO CODIS OPERATING PROCEDURES].

⁶⁴ *CODIS Brochure*, FED. BUREAU OF INVESTIGATION 1, <https://www.fbi.gov/file-repository/combined-dna-index-system-codis-brochure.pdf/view> (last visited Nov. 2, 2020).

⁶⁵ See OHIO CODIS OPERATING PROCEDURES, *supra* note 63, at 4.

⁶⁶ *Id.*

⁶⁷ See Debus-Sherrill & Field, *supra* note 6, at 3.

participating federal, state, and local forensic laboratories.⁶⁸ This system requires the determination of twenty core loci,⁶⁹ which ensures uniformity amongst the states because they all use the same terminology and collect profiles that are comparable to assist in DNA matching.⁷⁰

Three levels of stringency searches can be performed within CODIS.⁷¹ A high stringency search requires all alleles on the twenty core loci to match between the two DNA profiles,⁷² resulting in exact identification of an individual.⁷³ A moderate stringency test is run when crime scene evidence contains less than the twenty core loci because it is partially degraded or contains DNA from more than one individual.⁷⁴ This type of search requires all alleles to match, but allows the profiles to contain a different number of alleles.⁷⁵ A low stringency search requires a direct match of at least one of the alleles, even though the profiles also contain alleles that do not match.⁷⁶ Most CODIS searches are run at high or moderate stringency levels;⁷⁷ however, low stringency searches are increasing as more states implement familial DNA searches.

3. Expansion of DNA Collection to Familial DNA Searches

As previously stated, eleven states have expanded their use of CODIS by implementing familial searches.⁷⁸ While states have slowly adopted these searches over the past decade, the United Kingdom was the first country to conduct a familial DNA search and subsequently use that information for prosecution.⁷⁹ Other countries, such as New Zealand and the Netherlands, also perform familial DNA searches.⁸⁰

⁶⁸ *Frequently Asked Questions on CODIS and NDIS*, *supra* note 47.

⁶⁹ *Id.*

⁷⁰ *See CODIS Brochure*, *supra* note 64, at 2.

⁷¹ Eva Steinberger & Gary Sims, *Finding Criminals Through the DNA of Their Relatives—Familial Searching of the California Offender DNA Database*, 31 PROSECUTOR'S BRIEF 28, 30 (2008).

⁷² *Frequently Asked Questions on CODIS and NDIS*, *supra* note 47.

⁷³ Erin Murphy, *Relative Doubt: Familial Searches of DNA Databases*, 109 MICH. L. REV. 291, 297 (2010).

⁷⁴ *Id.*

⁷⁵ *Id.*

⁷⁶ *Id.*

⁷⁷ *Id.*

⁷⁸ Murray et al., *supra* note 5, at 3.

⁷⁹ Debus-Sherrill & Field, *supra* note 6, at 4–5.

⁸⁰ *Id.* at 5.

Familial DNA searches are often confused with partial matches.⁸¹ Partial matches result from routine searches of the NDIS database and are defined by the FBI as “a moderate stringency candidate match between two single source profiles having at each locus all the alleles of one sample represented in the other sample.”⁸² Partial matches are not suspects of the crime because some of the alleles do not match that of the crime scene sample.⁸³ Instead of being used to identify a suspect, that profile then becomes a pivot.⁸⁴ A pivot directs law enforcement to possible suspects who share a similar DNA profile with the pivot, such as a family member.⁸⁵ This is because people who are related have more commonalities in their genetic profiles than individuals who are unrelated to them.⁸⁶

Although partial matches and familial DNA searches are similar, a familial DNA search is defined as “an intentional or deliberate search of the database conducted after a routine search for the propose of potentially identifying close biological relatives of the unknown forensic sample associated with the crime scene profile.”⁸⁷ The process for conducting a familial DNA search is relatively the same as a partial match, as both are conducted through moderate to low stringency tests and result in pivot profiles of the true suspect.⁸⁸ The main difference is that familial searches are limited to male profiles because the tests can only look at STRs on the Y chromosome,⁸⁹ which is located solely in the male body.⁹⁰ Additionally, familial DNA searches are deliberate

⁸¹ *Frequently Asked Questions on CODIS and NDIS*, *supra* note 47.

⁸² *Id.*

⁸³ *Id.*

⁸⁴ Erica Haimes, *Social and Ethical Issues in the Use of Familial Searching in Forensic Investigations: Insights from Family and Kinship Studies*, 34 J.L., MED. & ETHICS 263, 269 (2006).

⁸⁵ *Id.*

⁸⁶ Murray et al., *supra* note 5, at 2.

⁸⁷ *Frequently Asked Questions on CODIS and NDIS*, *supra* note 47.

⁸⁸ See Murphy, *supra* note 73, at 296–98.

⁸⁹ BCI FAMILIAL SEARCH, *supra* note 11, at 2; Philip Ritter, *The Y-Chromosome and Genetic Genealogy*, STANFORD UNIV. (2005), <https://web.stanford.edu/~philr/Bachman/DNABachman3.html> (observing that the Y-chromosome is seen as more reliable because “[m]ost chromosomes, including the two x-chromosomes possessed by females, get recombined or shuffled each generation before being passed down to offspring. But the y-chromosome is unique in remaining more or less unchanged when passed from father to son. Thus while most chromosomes will contain a random mixture of genetic codes from one’s grandparents and great-grandparents, a male’s y-chromosome will be identical or nearly identical to that of his father, grandfather, great-grandfather and beyond for countless generations.”).

⁹⁰ *Y Chromosome*, MEDLINEPLUS (Aug. 17, 2020), <https://ghr.nlm.nih.gov/chromosome/Y>; EMILY NIEDZWIECKI ET AL., NAT’L CRIM. JUST. REFERENCE SERV., UNDERSTANDING FAMILIAL DNA SEARCHING: COMING TO A CONSENSUS ON TERMINOLOGY 4 (2017) (“Y-STR testing compares alleles located on the Y-chromosome that are identical among all paternally related

searches for relatives, while partial matches result from routine searches of the database.⁹¹ Lastly, familial searches are not conducted at the federal level or through the National DNA Index System.⁹² Instead, they are only performed by states that authorize familial searches, and are conducted through state and local DNA Index Systems.⁹³

B. Fourth Amendment Challenges to DNA Collection of Arrestees

The collection of felony-arrestee DNA under the Federal DNA Act has withstood constitutional challenges under the Fourth Amendment in Circuit Courts and the United States Supreme Court.⁹⁴ No United States court has reviewed the privacy implications involved in familial searches of felony-arrestee DNA. When the Ohio Supreme Court reviews this issue as a case of first impression, it will likely find that the privacy concerns implicated in Ohio's familial searches of arrestee DNA outweigh the governmental interest in performing the searches and violates the Fourth Amendment.

1. Fourth Amendment Analysis

The Fourth Amendment to the United States Constitution protects people from unreasonable searches and seizures.⁹⁵ The Fourth Amendment states:

The right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated, and no Warrants shall issue, but upon probable cause, supported by Oath or affirmation, and particularly describing the place to be searched, and the persons or things to be seized.⁹⁶

The United States Supreme Court best articulated the protections guaranteed by the Fourth Amendment through Justice Harlan's concurring opinion in *Katz v. United States*.⁹⁷ Justice Harlan stated that the Fourth Amendment extends to circumstances in which individuals have a "reasonable expectation of privacy."⁹⁸ The two-part test to determine reasonableness is whether the individual has a subjective expectation of

males but highly varied among the larger population. Y-STR testing can only be used with male samples (as the Y-chromosome is specific to male DNA) but it is highly reliable as the mutation rate of the alleles is very low.").

⁹¹ NIEDZWIECKI ET AL., *supra* note 90, at 7.

⁹² *Id.* at 2.

⁹³ *Id.* at 5–6.

⁹⁴ *Maryland v. King*, 569 U.S. 435, 439 (2013); *see* *United States v. Mitchell*, 652 F.3d 387, 389 (3d Cir. 2011).

⁹⁵ U.S. CONST. amend. IV.

⁹⁶ *Id.*

⁹⁷ *Katz v. United States*, 389 U.S. 347, 360 (1967) (Harlan, J., concurring).

⁹⁸ *Id.*

privacy and whether the expectation is recognized as objectively reasonable by society.⁹⁹ Article I, section 14 of the Ohio Constitution provides generally the same language as the Fourth Amendment.¹⁰⁰ The Ohio Supreme Court has determined that Article I, section 14 provides no other protections than that of the Fourth Amendment.¹⁰¹

Prior to Congress's amendment to the DNA Act, every circuit court that considered the constitutionality of a DNA indexing statute upheld the statute under the Fourth Amendment.¹⁰² However, subsequent to the passage of the Act, the circuits are divided on the proper test to apply when considering whether DNA indexing is a search under the Fourth Amendment.¹⁰³ The Second and Seventh Circuits apply the special needs doctrine,¹⁰⁴ while the First, Third, Fourth, Fifth, Sixth, Eighth, Ninth, Eleventh, and District of Columbia Circuits apply a totality of the circumstances test.¹⁰⁵

Under the special needs doctrine, the Supreme Court recognized that a warrantless search without suspicion is justified "when special needs, beyond the normal need for law enforcement, make the warrant and probable-cause requirement impracticable."¹⁰⁶ While a "general interest in crime control" is not enough, "some special law enforcement concerns" are justified when "the concept of individualized suspicion has little role to play."¹⁰⁷ When a special need is identified, reasonableness must be evaluated, balancing the gravity of the public interests, the degree to which the intrusion advances the public interests, and the severity of the interference with

⁹⁹ *Id.* at 361.

¹⁰⁰ The Ohio text reads:

The right of the people to be secure in their persons, houses, papers, and possessions, against unreasonable searches and seizures shall not be violated; and no warrant shall issue, but upon probable cause, supported by oath or affirmation, particularly describing the place to be searched and the person and things to be seized.

OHIO CONST. art. I, § 14.; *see also* U.S. CONST. amend. IV.

¹⁰¹ *State v. Robinette*, 685 N.E.2d 762, 766–67 (Ohio 1997).

¹⁰² *United States v. Mitchell*, 652 F.3d 387, 402 (3d Cir. 2011).

¹⁰³ *Id.* at 402–03.

¹⁰⁴ *See United States v. Amerson*, 483 F.3d 73, 78 (2d Cir. 2007); *United States v. Hook*, 471 F.3d 766, 773 (7th Cir. 2006); *Green v. Berge*, 354 F.3d 675, 677–78 (7th Cir. 2004).

¹⁰⁵ *Mitchell*, 652 F.3d at 403; *see United States v. Weikert*, 504 F.3d 1, 3 (1st Cir. 2007); *United States v. Sczubelek*, 402 F.3d 175, 184 (3d Cir. 2005); *Jones v. Murray*, 962 F.2d 302, 308 (4th Cir. 1992); *Groceman v. U.S. Dep't of Just.*, 354 F.3d 411, 413 (5th Cir. 2004); *Wilson v. Collins*, 517 F.3d 421, 427 (6th Cir. 2008); *United States v. Kraklio*, 451 F.3d 922, 924–25 (8th Cir. 2006); *United States v. Kriesel*, 508 F.3d 941, 946 (9th Cir. 2007); *Padgett v. Donald*, 401 F.3d 1273, 1278 (11th Cir. 2005); *Johnson v. Quander*, 440 F.3d 489, 495 (D.C. Cir. 2006).

¹⁰⁶ *Griffin v. Wisconsin*, 483 U.S. 868, 873 (1987) (quoting *New Jersey v. T.L.O.*, 469 U.S. 325, 351 (1980) (Blackmun, J., concurring)).

¹⁰⁷ *Illinois v. Lidster*, 540 U.S. 419, 424 (2004).

individual liberty.¹⁰⁸ The special needs test is the more stringent of the two tests because it requires the court to identify “some special need beyond the normal need for law enforcement.”¹⁰⁹

Under the totality of the circumstances test, the Supreme Court described that a reasonable search is determined “by assessing, on the one hand, the degree to which it intrudes upon an individual’s privacy and, on the other, the degree to which it is needed for the promotion of legitimate governmental interests.”¹¹⁰ The first prong in analyzing reasonableness under the totality of the circumstances test is evaluating the degree of intrusion that the search has on an individual’s privacy.¹¹¹ The second prong is to assess “the degree to which [the search] is needed for the promotion of legitimate governmental interests.”¹¹²

2. *United States v. Mitchell*: One of the First Cases to Conduct a Fourth Amendment Analysis of Arrestee DNA Collection

In 2011, the Third Circuit reviewed the constitutionality of collecting DNA samples from felony-arrestees under the Fourth Amendment in *United States v. Mitchell*.¹¹³ To determine whether Mitchell, a felony-arrestee, had a reasonable expectation of privacy, the court applied a totality of the circumstances test and determined that DNA collection entails two separate searches.¹¹⁴ The first search occurs when law enforcement physically collects a DNA sample from the felony-arrestee.¹¹⁵ However, the court relied on prior precedent finding that this is not a “search” under the Fourth Amendment by stating:

The Supreme Court has repeatedly held that the “intrusion occasioned by a blood test is not significant, since such ‘tests are a commonplace in these days of periodic physical examinations and experience with them teaches that the quantity of blood extracted is minimal, and that for most people the procedure involves virtually no risk, trauma, or pain.’”¹¹⁶

In light of the precedent on this issue, the court determined that the act of collecting a DNA sample was “neither a significant nor an unusual intrusion,”¹¹⁷ and the

¹⁰⁸ *Wilson*, 571 F.3d at 426 (citing *Lidster*, 540 U.S. at 426–27).

¹⁰⁹ *Amerson*, 483 F.3d at 80.

¹¹⁰ *United States v. Knights*, 534 U.S. 112, 118–19, 122 (2001) (citing *Wyoming v. Houghton*, 526 U.S. 295, 300 (1999)).

¹¹¹ *Id.* at 118–19 (quoting *Houghton*, 526 U.S. at 300).

¹¹² *Id.* at 119.

¹¹³ *United States v. Mitchell*, 652 F.3d 387, 391 (3d Cir. 2011).

¹¹⁴ *Id.* at 406.

¹¹⁵ *Id.*

¹¹⁶ *Id.* (citing *Schmerber v. California*, 384 U.S. 757, 771 (1966)).

¹¹⁷ *United States v. Weikert*, 504 F.3d 1, 12 (1st Cir. 2007).

intrusion of collecting a DNA sample did not significantly weigh in Mitchell's favor.¹¹⁸

The second search at issue occurs when law enforcement processes the DNA sample and creates a DNA profile in CODIS.¹¹⁹ The court determined that arrestees possess "a diminished expectation of privacy in their own identity, which has traditionally justified taking their fingerprints and photographs."¹²⁰ Thus, "because DNA profiles developed pursuant to the DNA Act function as 'genetic fingerprints' used only for identification purposes, arrestees and pretrial detainees have reduced privacy interests in the information derived from a DNA sample."¹²¹ Further, the court distinguished between a DNA sample and a DNA profile by stating that DNA samples contain information regarding familial lineage and genetic conditions while DNA profiles uploaded into CODIS only reveal identity, in which arrestees have a diminished expectation of privacy.¹²²

When assessing the government's interest, the court found that DNA collection furthers the government's interest in accurately identifying arrestees and pretrial detainees, which would be lost if the government waited until conviction to take a DNA sample.¹²³ After weighing the interests of the government and the arrestee, the court concluded that "under the totality of the circumstances, given arrestees' and pretrial detainees' diminished expectations of privacy in their identities and the Government's legitimate interests in the collection of DNA from these individuals" the collection is reasonable and not a violation of the Fourth Amendment.¹²⁴

3. *Maryland v. King*: The Supreme Court's Fourth Amendment Assessment of Arrestee DNA Collection

In 2013, the United States Supreme Court reviewed the constitutionality of Maryland's DNA Collection Act in *Maryland v. King*.¹²⁵ The statute required that law enforcement collect the DNA of felony-arrestees, but specifically precluded use of arrestee DNA in familial DNA searches.¹²⁶ In applying the totality of the circumstances test, the Court afforded great weight to both the significant government

¹¹⁸ *Mitchell*, 652 F.3d at 407.

¹¹⁹ *Id.*

¹²⁰ *Id.* at 412.

¹²¹ *Id.*

¹²² *Id.* at 412–13 (citing *United States v. Mitchell*, 681 F. Supp. 2d 597, 608 (W.D. Pa. 2009)).

¹²³ *Id.* at 414.

¹²⁴ *Id.* at 416.

¹²⁵ *See Maryland v. King*, 569 U.S. 435, 439 (2013).

¹²⁶ *Id.* at 443–44; MD. CODE ANN., PUB. SAFETY § 2-506(d) (2009) ("A person may not perform a search of the statewide DNA data base for the purpose of identification of an offender in connection with a crime for which the offender may be a biological relative of the individual from whom the DNA sample was acquired.").

interest at stake in the identification of arrestees and the unmatched potential of DNA identification to serve that interest.¹²⁷ The Supreme Court agreed with the Third Circuit's analysis in *Mitchell* and found that the governmental interest in identification of arrestees outweighs the arrestee's diminished sense of personal privacy.¹²⁸ Ohio courts have never specifically ruled on this issue, but the Ohio Supreme Court has cited to *King* accepting it as precedent.¹²⁹

As some of the first cases upholding arrestee DNA collection statutes,¹³⁰ the precedent set in *Mitchell* and *King* must be consulted when addressing expansions to arrestee DNA collection laws. *King* sets important limitations on the uses of arrestee DNA that are being ignored by the State of Ohio in familial DNA searches,¹³¹ while *Mitchell* operated under a misunderstanding of the vast amount of information that can be gathered from an arrestee's DNA profile.¹³² Application of these cases, along with a Fourth Amendment analysis under both the special needs and totality of the circumstances tests, demonstrate how Ohio's inclusion of arrestee DNA in familial DNA searches is too expansive and thus a violation of the Fourth Amendment.

III. WHY FAMILIAL SEARCHES OF ARRESTEE DNA PROFILES ARE UNCONSTITUTIONAL

Although familial DNA searches are not conducted at the national level nor are they performed by the national DNA index System,¹³³ they are performed by the state of Ohio through the State DNA index System.¹³⁴ Ohio has provided a protocol outlining how arrestee DNA searches are conducted, and although the protocol lists

¹²⁷ *King*, 569 U.S. at 461.

¹²⁸ *Id.* at 464–65.

¹²⁹ *State v. Banks-Harvey*, 96 N.E.3d 262, 275 (Ohio 2018).

¹³⁰ *See Haskell v. Harris*, 669 F.3d 1049, 1051 (9th Cir. 2012) (holding that DNA analysis was effective to identify arrestees, solve past crimes, and exonerate innocent suspects, so government's compelling interests outweighed arrestee's privacy concerns; thus no Fourth Amendment violation in collecting arrestees' DNA samples and no likelihood of success on challenge of the 2004 Amendment to California's DNA Act); *see also* *People v. Buza*, 129 Cal. Rptr. 3d 753, 783 (Cal. Ct. App. 2011) (finding that the Fourth Amendment was violated by the requirement under the DNA Act that a felony arrestee submit a DNA sample for law enforcement analysis and inclusion in DNA databases, without independent suspicion, a warrant, or even a judicial or grand jury determination of probable cause).

¹³¹ *King*, 569 U.S. 435, 444 (2013) (“Tests for familial matches are also prohibited.”).

¹³² *United States v. Mitchell*, 652 F.3d 387, 409 n.19 (3d Cir. 2011) (finding that CODIS is not designed for intentional familial searches and that such searches do not produce any useful information).

¹³³ *Frequently Asked Questions on CODIS and NDIS*, *supra* note 47.

¹³⁴ *See* BCI FAMILIAL SEARCH, *supra* note 11.

certain limitations in conducting familial DNA searches, none of the limitations address whether a familial DNA search can be conducted of an arrestee's DNA.¹³⁵

As previously noted, circuit courts have conducted a Fourth Amendment analysis of the DNA Act allowing for the collection of an arrestee's DNA and the subsequent creation of a DNA profile in CODIS.¹³⁶ The Ohio Supreme Court has not individually reviewed the constitutionality of its version of the DNA Act, § 2901.07(a) of the Ohio Revised Code. However, the Ohio Supreme Court has cited to *Maryland v. King* in other opinions, which confirms that Ohio follows the precedent established by the United States Supreme Court.¹³⁷ No court in the United States has reviewed the constitutionality of a familial DNA search. Thus, no court has had the opportunity to review the more specific topic of whether a familial DNA search of arrestee DNA is a search under the Fourth Amendment. Upon a review of this issue, the Ohio Supreme Court should find that the use of an arrestee's DNA in a familial search is unconstitutional under the Fourth Amendment because familial DNA searches fail both the totality of the circumstances and the special needs tests applied by various circuits. Moreover, it can be argued that the United States Supreme Court has precluded familial searches from arrestee DNA collection.

A. Familial DNA Searches Conduct a Third Unlawful Search That Violates the Fourth Amendment

Courts that have conducted a Fourth Amendment analysis of arrestee DNA statutes have approached DNA collection as a two-part search.¹³⁸ A search under the Fourth Amendment occurs when a governmental employee or agent of the government violates an individual's reasonable expectation of privacy.¹³⁹ Although the Court has not definitively outlined which expectations of privacy are entitled to protection, the intention of the framers when creating the Fourth Amendment was "to place obstacles in the way of a too permeating police surveillance."¹⁴⁰ In a familial DNA search, the first search involves a physical bodily invasion and is administered by taking a buccal swab from the arrestee. Courts have held that invasions similar to buccal swabs are searches that implicate the Fourth Amendment.¹⁴¹ Buccal swabs, however, do not reveal personal information about an individual unless it is entered into CODIS or a

¹³⁵ OHIO REV. CODE ANN. § 2901.07(B)(1)(a) (2020); BCI FAMILIAL SEARCH, *supra* note 11, at 3.

¹³⁶ *Mitchell*, 652 F.3d at 402.

¹³⁷ *State v. Banks-Harvey*, 96 N.E.3d 262, 275 (Ohio 2018).

¹³⁸ *Mitchell*, 652 F.3d at 406.

¹³⁹ *Katz v. United States*, 389 U.S. 347, 361 (1967) (Harlan, J., concurring).

¹⁴⁰ *Carpenter v. United States*, 138 S. Ct. 2206, 2214 (2018) (citing *United States v. Di Re*, 332 U.S. 581, 595 (1948)).

¹⁴¹ *Maryland v. King*, 569 U.S. 435, 446 (2013); *State v. Steele*, 802 N.E.2d 1127, 1132 (Ohio Ct. App. 2003); *People v. Buza*, 129 Cal. Rptr. 3d 753, 760 (Cal. Ct. App. 2011) ("Courts have routinely held that the collection of DNA by means of a blood test is a minimal intrusion into an individual's privacy interest in bodily integrity while collection by means of a buccal swab is even less intrusive.") (internal citations omitted); *Mitchell*, 652 F.3d at 407.

searchable database.¹⁴² This leads to the second search, which is the creation of a DNA profile in CODIS and the comparison of that profile to other profiles.¹⁴³ The second search is what has been focused on by courts and has generally withstood constitutional review.¹⁴⁴

This Note asserts that Ohio's practice of conducting a familial search of an arrestee's DNA profile creates a third "search" that must be reviewed under a Fourth Amendment analysis. In assessing the constitutionality of a familial search of an arrestee's DNA under a Fourth Amendment analysis, it is clear that an arrestee has a reasonable expectation of privacy in his or her familial DNA. Applying either the totality of the circumstances or special needs test confirms that the individual interest of the arrestee outweighs the governmental interest in conducting the search.

1. Arrestees Have a Reasonable Expectation of Privacy in Familial DNA

A search under the Fourth Amendment occurs when the government violates an individual's reasonable expectation of privacy.¹⁴⁵ In Justice Harlan's *Katz* concurring opinion, he explained that to determine whether an individual has a reasonable expectation of privacy "there is a twofold requirement, first that a person have exhibited an actual (subjective) expectation of privacy and second, that the expectation be one that society is prepared to recognize as 'reasonable.'"¹⁴⁶ The Court clarified in *California v. Ciraolo* that "[t]he second question under *Katz* has been described as asking whether an expectation of privacy is 'legitimate in the sense required by the Fourth Amendment.'"¹⁴⁷ There, Justice Powell observed in a footnote that "[s]ince *Katz*, our decisions also have described constitutionally protected privacy interests as those that society regards as 'legitimate,' using the words 'reasonable' and 'legitimate' interchangeably."¹⁴⁸ Although the dissent would have applied a higher standard here, this proposition is not inconsistent with the Court's decision.¹⁴⁹ Here, arrestees do have a reasonable expectation of privacy in the information that is extracted from their DNA profiles during a familial DNA search because they meet both prongs of the reasonableness test.

In *State v. Emerson*, the Supreme Court of Ohio addressed whether an individual has a reasonable expectation of privacy in the DNA profile that was obtained from the

¹⁴² Brendan Heil, *Striking a Balance: Why Ohio's Felony Arrestee Statute is Unconstitutional and Ripe for Legislative Action*, 61 CLEV. ST. L. REV. 529, 554 (2013).

¹⁴³ *Buza*, 129 Cal. Rptr. 3d at 760 ("The latter search is the true focus of our analysis and the analyses of other courts that have considered the validity of DNA statutes.").

¹⁴⁴ *King*, 569 U.S. at 465; *Mitchell*, 652 F.3d at 416.

¹⁴⁵ *Katz v. United States*, 389 U.S. 347, 361 (1967) (Harlan, J., concurring).

¹⁴⁶ *Id.*

¹⁴⁷ *California v. Ciraolo*, 476 U.S. 207, 219 (1986) (Powell, J., dissenting) (quoting *Oliver v. United States*, 466 U.S. 170, 182 (1984)).

¹⁴⁸ *Id.* at 219 n.4.

¹⁴⁹ *See id.* at 212 (majority opinion) (using "legitimacy" and "reasonableness" interchangeably in the prong two analysis).

individual's DNA sample.¹⁵⁰ The court recognized that an individual has a legitimate expectation of privacy in his or her own bodily fluids, which extends to DNA samples taken from arrestees.¹⁵¹ However, the court found that when a DNA sample is obtained lawfully by warrant or statute, an individual does not have a reasonable expectation of privacy in a DNA profile created from the sample.¹⁵² Thus, an individual lacks standing to object to its use by the State in a subsequent criminal investigation.¹⁵³

In coming to its conclusion, the court attempted to apply the two prong reasonable expectation of privacy test.¹⁵⁴ In assessing the individual's subjective expectation of privacy, it appears that the court misapplied the subjective test and instead sought to determine whether the individual possessed a legitimate expectation of privacy in his DNA profile,¹⁵⁵ which is assessed under the reasonableness prong of the *Katz* test.¹⁵⁶ Instead, the court should have applied the correct test, which is whether the individual manifested a subjective expectation of privacy in the object of the challenged search.¹⁵⁷ By failing to look at the individual's subjective manifestation of privacy, the court failed to perform the first prong of the test.

While mistaking it as part of the subjective test, the court did assess the objective prong of the test by determining whether the individual's expectation of privacy is legitimate.¹⁵⁸ The court found that an individual does not have a legitimate expectation of privacy in his DNA profile because after a DNA sample is collected from an individual, a government official must perform a "scientific process" on the sample to obtain the DNA profile.¹⁵⁹ According to the court, because the "scientific process" is performed by a government official, the DNA profile is a work product of the government, and individuals have no possessory ownership interest in their own DNA profile.¹⁶⁰ Additionally, the Ohio Supreme Court has held:

[A] defendant [can] not plausibly assert any expectation of privacy with respect to the scientific analysis of a lawfully seized item of tangible property, such as a gun or a controlled substance. Although, human blood, with its unique genetic properties, may initially be quantitatively different from such evidence, once constitutional concerns have been satisfied, a blood

¹⁵⁰ *Emerson v. State*, 981 N.E.2d 787, 790 (Ohio 2012).

¹⁵¹ *Id.* at 791.

¹⁵² *Id.* at 792.

¹⁵³ *Id.*

¹⁵⁴ *Id.* at 791–93.

¹⁵⁵ *Id.* at 791–92.

¹⁵⁶ *California v. Ciraolo*, 476 U.S. 207, 219 (1986) (Powell, J., dissenting).

¹⁵⁷ *Id.* at 211 (majority opinion).

¹⁵⁸ *Emerson*, 981 N.E.2d at 791.

¹⁵⁹ *Id.*

¹⁶⁰ *Id.*

sample is not unlike other tangible property which can be subject to a battery of scientific tests.¹⁶¹

Focusing on the current issue of familial DNA searches of arrestee DNA, *Emerson* can be distinguished as it focuses on an arrestee's expectation of privacy in the physical DNA sample itself rather than the information that is extracted from the sample.¹⁶² Here, the question is whether an arrestee has a reasonable expectation of privacy in the information that is extracted from his DNA profile during a familial DNA search.

An arrestee has a subjective reasonable expectation of privacy in the information that is obtained from his DNA profile during a familial DNA search. Familial searches reveal private information about male genetically related family members,¹⁶³ which may not be available to law enforcement without the arrestee's DNA sample. This information is personal to the arrestee because it reveals information about family relationships and possible relationships unknown to the arrestee. Because there is a large amount of personal information that can be obtained from an arrestee's DNA profile during a familial DNA search, it is likely that he has a subjective expectation of privacy against government intrusion in this information and is not knowingly exposing it to the public, thus, satisfying the first prong of the reasonableness test.

It can also be determined that an arrestee's expectation of privacy is legitimate and reasonable. When assessing whether the expectation of privacy is legitimate, the Ohio Supreme Court's analysis in *Emerson* is distinguishable. Although the court in *Emerson* is correct in finding that the State must perform its own scientific process on an arrestee's DNA sample, giving an arrestee no possessory interest in the DNA profile itself,¹⁶⁴ an arrestee *does* have an interest in the information that is extracted from the profile during a familial DNA search. The physical DNA sample reveals no personal information about the arrestee until it is analyzed against other DNA profiles in CODIS.¹⁶⁵ Thus, it is the information that is revealed through these comparisons in which arrestees have a legitimate privacy interest. Familial DNA searches reveal information about the arrestee's relationships with their family,¹⁶⁶ and although the government may create the system in which the information is extracted, that does not give it ownership of the private information. The information still belongs to the arrestee as it pertains to his familial relationships. Because the arrestee does have possessory interests over the information extracted from his DNA profile, his expectation of privacy is legitimate.

Further, the court in *Emerson* associated DNA profiles to being like fingerprints and blood samples which are "maintained on file by law enforcement authorities for

¹⁶¹ *Id.* at 792 (alteration in original) (citing *Wilson v. State*, 752 A.2d 1250, 1269 (Md. Ct. Spec. App. 2000) (internal quotation marks omitted).

¹⁶² *Id.* at 791.

¹⁶³ BCI FAMILIAL SEARCH, *supra* note 11, at 2.

¹⁶⁴ *Emerson*, 981 N.E.2d at 791.

¹⁶⁵ Heil, *supra* note 142, at 554.

¹⁶⁶ BCI FAMILIAL SEARCH, *supra* note 11, at 2.

use in further investigations.”¹⁶⁷ Here, unlike fingerprints and blood samples, familial DNA searches do not readily identify one defendant and instead reveal information about other individuals who do not have their own DNA profile in CODIS. The scope of the information obtained in a familial DNA search goes beyond that of *Emerson*, giving an arrestee a legitimate expectation of privacy. Thus, the second prong of the reasonableness test has been met, giving an arrestee a reasonable expectation of privacy in the information extracted from his DNA profile.

2. Application of the Totality of the Circumstances Test

Since an arrestee has a reasonable expectation of privacy in the information that is obtained from a familial DNA search, the next step in a Fourth Amendment analysis is to determine if the search was reasonable. Reasonableness is the ultimate measure of the constitutionality of a search or seizure, and all warrantless searches and seizures are presumed to be unreasonable unless they fall within a limited exception.¹⁶⁸ Warrantless collection of DNA samples fall within the probable cause exception to the Fourth Amendment,¹⁶⁹ and courts analyzing the reasonableness of the search do so through an objective assessment considering the degree of intrusion by the search and the manner in which the search was conducted.¹⁷⁰

In conducting the assessment, a majority of courts apply the totality of the circumstances test, which requires balancing an individual’s reasonable expectation of privacy against the degree to which the intrusion is needed for the promotion of legitimate governmental interests.¹⁷¹ Here, where an individual’s DNA is taken after arrest, the DNA is used to create a DNA profile in CODIS, and that profile is used in a familial search, the balancing test must be applied to each of the three steps as all three implicate “searches” under the Fourth Amendment.

The first search is the bodily intrusion that occurs when an arrestee’s DNA is physically taken.¹⁷² The primary way that a DNA sample is collected under Ohio’s arrestee DNA statute is by collecting a buccal swab.¹⁷³ The Ohio Supreme Court has concluded that taking a buccal swab of the inner tissues of an individual’s cheek to obtain DNA is a search,¹⁷⁴ but has stated that the manner of taking DNA by a buccal

¹⁶⁷ *Emerson*, 981 N.E.2d at 792–93 (citing *Wilson v. State*, 752 A.2d 1250, 1269 (Md. Ct. Spec. App. 2000) (internal quotation marks omitted).

¹⁶⁸ *Fourth Amendment*, CORNELL LAW LEGAL INFORMATION INSTITUTE, https://www.law.cornell.edu/wex/fourth_amendment (last edited June 2017).

¹⁶⁹ *Id.*

¹⁷⁰ *Id.*

¹⁷¹ *United States v. Knights*, 534 U.S. 112, 119 (2001) (citing *Wyoming v. Houghton*, 526 U.S. 295, 300 (1999)).

¹⁷² *United States v. Mitchell*, 652 F.3d 387, 406 (3d Cir. 2011).

¹⁷³ *DNA Unit*, OHIO ATT’Y GEN., <https://www.ohioattorneygeneral.gov/Law-Enforcement/Bureau-of-Criminal-Investigation/Laboratory-Division/DNA-Unit> (last visited Dec. 3, 2019).

¹⁷⁴ *State v. Tench*, 123 N.E.3d 955, 979 (citing *Maryland v. King*, 569 U.S. 435, 446 (2013)).

swab is minimally intrusive.¹⁷⁵ Additionally, the swab itself does not reveal private information about an individual until it is uploaded into a DNA database.¹⁷⁶ This Note agrees with the findings of the majority of courts that the governmental interest in collecting DNA swabs for potential evidentiary purposes plus the minimally intrusive measure by which it is taken outweighs an individual's privacy concerns.¹⁷⁷ Thus, the first search is reasonable.

The second search is the comparison of an arrestee's DNA profile to other DNA profiles in CODIS. In determining the reasonableness of this type of search, courts weigh the promotion of legitimate governmental interests against the degree to which the search intrudes upon an individual's privacy.¹⁷⁸ Many courts have held that "probable cause provides legal justification for arresting a suspect and for a brief period of detention to take administrative steps incident to arrest."¹⁷⁹ Courts have determined that this probable cause determination, and the fact that arrestees must submit to routine booking procedures results in a diminished expectation of privacy for arrestees.¹⁸⁰ In *Maryland v. King*, the U.S. Supreme Court established that the legitimate government interest served by arrestee DNA collection is "the need for law enforcement officers in a safe and accurate way to process and identify the persons and possessions they must take into custody."¹⁸¹ When balancing these two interests, the Supreme Court in *King* found that the governmental interest outweighs the diminished reasonable expectation of privacy of an arrestee who has not yet been found guilty of a crime.¹⁸² Since the scale tips in favor of the governmental interest, this search is reasonable and does not violate the Fourth Amendment.

The third search occurs when an arrestee's DNA profile is used in a familial DNA search. Under Ohio Revised Code § 2901.07(b) and pursuant to the twelve-page protocol released by the Ohio Attorney General's Office, Ohio is subjecting male arrestees to this third unlawful search by implementing familial DNA searches in criminal investigations. The guidelines set forth by the Ohio Attorney General established that the State searches "[a] DNA profile that is currently in CODIS and has been searched at NDIS and SDIS" and "the DNA profile must be associated with a crime committed in Ohio."¹⁸³ This broad language confirms that there are no limitations on the searches, and all DNA profiles that have been entered into Ohio's

¹⁷⁵ *King*, 569 U.S. at 446.

¹⁷⁶ Heil, *supra* note 142, at 12.

¹⁷⁷ *Mitchell*, 652 F.3d at 406–07; *Nicholas v. Goord*, 430 F.3d 652, 657 (2d Cir. 2005); *United States v. Weikert*, 504 F.3d 1, 12 (1st Cir. 2007).

¹⁷⁸ *King*, 569 U.S. at 436 (citing *Wyoming v. Houghton*, 526 U.S. 295, 300 (1999)).

¹⁷⁹ *Id.* (citing *Gerstein v. Pugh*, 420 U.S. 103, 113–14 (1975)).

¹⁸⁰ *Mitchell*, 652 F.3d at 412.

¹⁸¹ *King*, 569 U.S. at 449.

¹⁸² *See id.* at 449–56.

¹⁸³ BCI FAMILIAL SEARCH, *supra* note 11, at 4.

CODIS database are subjected to familial DNA searches, including arrestees who have not been proven guilty of criminal activity.

Although no court has applied a totality of the circumstances analysis to this type of search yet, courts have indicated that this third search involves an invasion into an arrestee's reasonable expectation of privacy and outweighs the governmental interest.¹⁸⁴ This Note agrees with the presumptions made by these courts and finds that the third search creates an intrusion into arrestees' reasonable expectation of privacy that substantially outweighs all governmental interests that have been put forth by courts to support the constitutionality of the creation and comparison of arrestee DNA profiles.

In *King*, the Supreme Court found that arrestee DNA collection was reasonable on two major grounds. First, collecting an individual's DNA upon arrest is similar to that of collecting an arrestee's fingerprint upon booking, which the Court found to be an accurate way of identifying an arrestee.¹⁸⁵ Second, the legitimate governmental interest of "the need for law enforcement officers in a safe and accurate way to process and identify the persons and possessions they must take into custody"¹⁸⁶ outweighed an arrestee's diminished expectation of privacy rights.¹⁸⁷ Applying this holding to Ohio's third search of arrestee familial DNA testing demonstrates why the intrusion into the arrestee's reasonable expectation of privacy outweighs the governmental interests supplied by the Supreme Court.

First, the Court stated that DNA collection is similar to that of fingerprinting.¹⁸⁸ This is true when looking at DNA collection as a way of identifying an arrestee, but when applying that theory to familial searches of arrestee DNA, the two are incomparable. Familial searches of DNA go beyond mere identification and are used to reveal personal information about the arrestee, such as his blood relatives.¹⁸⁹ The DNA sample is then used to implicate identified blood relatives in other crimes before even solidifying a conviction for the arrestee.¹⁹⁰ Contrarily, the information which is provided from fingerprinting only identifies the arrestee; it does not identify any other individuals.¹⁹¹ When subjecting an arrestee's DNA sample to a familial search, the information revealed goes beyond that of fingerprinting, creating a more intrusive procedure into the arrestee's reasonable expectation of privacy. For example, familial DNA testing can reveal that a child was adopted, conceived via assisted conception

¹⁸⁴ See *King*, 569 U.S. at 444 (prohibiting familial searches of arrestee DNA profiles).

¹⁸⁵ *Id.* at 451.

¹⁸⁶ *Id.* at 449.

¹⁸⁷ *Id.* at 447.

¹⁸⁸ *Id.* at 451.

¹⁸⁹ *Frequently Asked Questions on CODIS and NDIS*, *supra* note 47.

¹⁹⁰ See BCI FAMILIAL SEARCH, *supra* note 11, at 4 (performing familial searches on a DNA profile currently in CODIS); OHIO REV. CODE ANN. § 2901.07(a) (2020) (collecting DNA samples from arrestees).

¹⁹¹ See *King*, 569 U.S. at 451 (comparing DNA profiles to the identification given by fingerprints).

by donation of a sperm or egg, or conceived through an adulterous relationship.¹⁹² Additionally, it can reveal other genetic relationships such that a child was born of incest and may be both a sibling and a child of the mother.¹⁹³ These revelations may reveal highly personal and sensitive information that parents would not have disclosed to their children, but against their will they will be revealed through a successful DNA match.¹⁹⁴

Second, the governmental interests provided in *King* relate to the arrestee himself, and do not express a need for the government to include arrestees in a familial search.¹⁹⁵ The Court identified interests such as assurance that an arrestee will not create risks for facility staff, the need to know the type of person being detained, the governmental interest in ensuring all accused of crimes are available for trial, the need to assess an arrestee's danger to the public, and the possibility that correct identification of an arrestee can free a person who is wrongfully imprisoned.¹⁹⁶ These interests demonstrate a clear focus on governmental interests involving the arrestee, and provide no certainty as to whether or not they extend to the arrestee's blood relatives. The governmental interests are satisfied by a search of the arrestee's DNA in CODIS. Any subsequent familial searches that occur greatly exceed these interests.

Third, in his dissent, Justice Scalia argued that the government's means of "identifying someone" is really "searching for evidence that he has committed crimes unrelated to the crime of his arrest."¹⁹⁷ He continued by stating, "[i]f identifying someone means finding out what unsolved crimes he has committed, then identification is indistinguishable from the ordinary law-enforcement aims that have never been thought to justify a suspicionless search."¹⁹⁸ Justice Scalia added that "[s]earching every lawfully stopped car, for example, might turn up information about unsolved crimes the driver had committed, but no one would say that such a search was aimed at 'identifying' him, and no court would hold such a search lawful."¹⁹⁹ Justice Scalia's thoughts of the government's interest in "identifying" arrestees created a further invasion into their reasonable expectation of privacy. By using an arrestee's DNA profiles in familial searches, the government is doing exactly what Scalia described in his dissent.²⁰⁰ It appears that the only reason for including arrestee DNA profiles in familial searches is to find potential leads in unsolved crimes by broadening the number of searchable profiles in CODIS. No other legitimate

¹⁹² Sonia M. Suter, *All in the Family: Privacy and DNA Familial Searching*, 23 HARV. J.L. & TECH. 309, 343 (2010).

¹⁹³ *Id.*

¹⁹⁴ *Id.* at 343–44.

¹⁹⁵ *King*, 569 U.S. at 449–56.

¹⁹⁶ *Id.*

¹⁹⁷ *Id.* at 470 (Scalia, J., dissenting).

¹⁹⁸ *Id.*

¹⁹⁹ *Id.*

²⁰⁰ *Id.*

governmental interest exists for including arrestees in the search other than the possibility of revealing information about crimes in which the arrestee's family members may be implicated. Familial searches of arrestee DNA profiles illustrate exactly what Justice Scalia feared in his dissent; the government is creating a DNA profile of an arrestee's DNA and using it to implicate an arrestee's family members in crimes unrelated to the crime for which the arrestee was charged. In no other context would this search be considered lawful,²⁰¹ and familial searches should no longer be the exception.

Thus, when balancing an arrestee's reasonable expectation of privacy against the governmental interest in conducting arrestee familial DNA searches, the scale tips heavily in favor of the arrestee's reasonable expectation of privacy. Although the Supreme Court determined that arrestees have a reduced expectation of privacy,²⁰² that expectation should not be imputed to their uninvolved family members as well. By subjecting arrestees to familial DNA searches, the State of Ohio is using the Supreme Court's holding in *King* to bypass searches of the arrestee and expand it to their family members as well. The use of arrestee DNA to conduct searches of blood relatives goes well beyond the governmental interests cited in *King*, which were concerned with mere identification and circumstances involving the arrestee.²⁰³ These governmental interests are completely unrelated to familial DNA testing of arrestee DNA, resulting in no legitimate governmental interest in conducting the searches. Familial DNA tests of arrestee DNA are not aimed at the identification of the arrestee, and instead, are completely unrelated to the crime of his arrest. This type of fishing expedition for evidence is a substantial invasion into an arrestee's reasonable expectation of privacy, and it is not outweighed by the government's purported legitimate reasons for conducting the searches.

3. Application of the Special Needs Doctrine

The special needs doctrine allows for warrantless searches and seizures without individualized suspicion.²⁰⁴ Unlike the totality of the circumstances test, which allows a court to balance an individual's reasonable expectation of privacy against competing government interests,²⁰⁵ the special needs doctrine requires a more stringent two-part test.²⁰⁶ That is, whether the statute presents a valid special need and then a balancing of whether the special need of the government exceeds the individual's privacy interest.²⁰⁷ Under this doctrine, "as long as a government interest exists beyond the need to procure criminal convictions, governmental special needs can be enough to

²⁰¹ *Id.*

²⁰² *Id.* at 463 (majority opinion).

²⁰³ *See id.* at 449–56.

²⁰⁴ *State v. Steele*, 802 N.E.2d 1127, 1134 (Ohio Ct. App. 2003).

²⁰⁵ *United States v. Knights*, 534 U.S. 112, 118–19, 122 (2001) (citing *Wyoming v. Houghton*, 526 U.S. 295, 300 (1999)).

²⁰⁶ *Steele*, 802 N.E.2d at 1134.

²⁰⁷ *Id.*

obviate the general requirement of probable cause or individualized suspicion of wrongdoing.”²⁰⁸ If there is a valid special need that is more than the “general interest in crime control,”²⁰⁹ the court will balance the individual’s privacy interest with the valid special need to determine whether the search is a violation of the Fourth Amendment.²¹⁰

The special needs doctrine has been used in a few circuits to uphold DNA sampling of convicted felons.²¹¹ Likewise, the Ohio Court of Appeals for the First District applied the special needs doctrine in *State v. Steel* to determine the constitutionality of a statute permitting the DNA collection of convicted offenders.²¹² The court found that the statute was constitutional because the statute increased the accuracy of the criminal justice system and solved future crimes.²¹³ The court believed that both of these purposes went beyond that of normal law enforcement, thus satisfying the special needs test.²¹⁴

However, the court in *Steel* is incorrect because the two purposes that the court highlighted do not go beyond the normal duties of law enforcement. Protecting communities and solving future crimes is exactly what police departments are designed to do.²¹⁵ The court’s holding was misplaced because it relied on two purposes that do not go beyond the basic purposes of law enforcement.

Thus, when applying the special needs doctrine to Ohio’s third search of arrestee DNA profiles in familial searches, courts should not give any weight to *Steel*. As previously highlighted, the main purpose behind these searches is to increase the amount of DNA profiles in CODIS so law enforcement can identify individuals involved in unsolved crimes.²¹⁶ No other legitimate purpose exists beyond general law enforcement purposes and a general interest in crime control. Therefore, Ohio’s third search of arrestee DNA profiles in familial searches is unconstitutional under the special needs doctrine.

The unreasonable privacy invasions that occur through familial DNA searches of arrestee DNA may result in an even greater invasion into the reasonable expectation of privacy of the arrestee’s family members. Although it will not be specifically

²⁰⁸ *Id.*

²⁰⁹ *City of Indianapolis v. Edmond*, 531 U.S. 32, 41 (2000).

²¹⁰ *Steele*, 802 N.E.2d at 1137; *see* *Ferguson v. City of Charleston*, 532 U.S. 67, 78 (2001); *Edmond*, 531 U.S. at 41–42.

²¹¹ *Nicholas v. Goord*, 430 F.3d 652, 666 (2d Cir. 2003); *Green v. Berge*, 354 F.3d 675, 678 (7th Cir. 2004); *United States v. Kimler*, 335 F.3d 1132, 1146 (10th Cir. 2003).

²¹² *Steele*, 802 N.E.2d at 1137.

²¹³ *Id.* at 1136.

²¹⁴ *Id.*

²¹⁵ Heil, *supra* note 142, at 541 (citing *Police Department, LAKEWOOD, OHIO*, <http://onelakewood.com/police/> (last visited Dec. 3, 2019) (using the Lakewood Police Department’s mission statement to explain the goals of policing)).

²¹⁶ *Maryland v. King*, 569 U.S. 435, 473 (2013) (Scalia, J., dissenting).

addressed in this Note, the possibility of these greater implications is important to keep in mind when reviewing a Fourth Amendment challenge to familial DNA searches of arrestee DNA.

*B. Cases Upholding Arrestee DNA Collection Specifically Precluded
Arrestee DNA from Familial DNA Searches*

Courts that have upheld the constitutionality of arrestee DNA collection statutes under the Fourth Amendment intended to exclude the potential for familial DNA searches. First, the United States Supreme Court in its national authorization of arrestee DNA collection in *Maryland v. King* did not intend for arrestee DNA to be used in a familial search. In *King*, the Court analyzed the Maryland DNA Collection Act which specifically precludes familial searches from arrestee DNA.²¹⁷ The Court based its holding, that the processing of an arrestee's DNA sample in CODIS is constitutional, on this fact. The Court stated that the Maryland DNA Collection Act is constitutional because the loci does not reveal an "arrestee's genetic traits and are unlikely to reveal any private medical information. Even if they could provide such information, they are not in fact tested for that end."²¹⁸ Although medical information is different from the information that is gathered from a familial DNA search, familial DNA searches reveal genetic relationships about an individual's family members and themselves that may not be the same as their social relationships.²¹⁹ As previously stated, familial DNA tests can reveal genetics unknown to the arrestee such as the fact that they were adopted, they are a child of incest, or that they were conceived via assisted conception.²²⁰ Thus, a familial search for an individual's genetic traits expressly goes beyond the Supreme Court's holding in *King*.

Second, although the Court ruled on the Maryland DNA Collection Act, the Court specifically stated that it was making a universal ruling on all arrestee DNA statutes by stating that although the arrestee DNA laws are different in each state, "their similarity means that this case implicates more than the specific Maryland law. At issue is a standard, expanding technology already in widespread use throughout the Nation."²²¹ Additionally, the Ohio Supreme Court has not ruled on the constitutionality of arrestee DNA collection and instead cites to *Maryland v. King*.²²² Therefore, the Court's reasoning behind the ruling in *King* applies to the State of Ohio. Since Ohio follows *King*, Ohio is limited to the holding of the case which allows for the creation of DNA profiles of arrestees but for the limited purpose of using it for searches against other crime scene profiles that are already in CODIS. The use of an

²¹⁷ See MD. CODE ANN., PUB. SAFETY § 2-506(d) (2020) ("A person may not perform a search of the statewide DNA data base for the purpose of identification of an offender in connection with a crime for which the offender may be a biological relative of the individual from whom the DNA sample was acquired.").

²¹⁸ *King*, 569 U.S. at 438.

²¹⁹ See *supra* notes 197–99.

²²⁰ See *supra* notes 197–99.

²²¹ *King*, 569 U.S. at 445–46.

²²² *State v. Banks-Harvey*, 96 N.E.3d 262, 275 (Ohio 2018) (Kennedy, J., concurring).

arrestee's DNA profile in a familial search goes against this narrow holding and expands DNA searching past the limits of constitutionality.

Third, *King* relies on the Third Circuit's opinion in *United States v. Mitchell*, which specifically excludes a familial DNA search from its analysis.²²³ In *Mitchell*, the appellant distinguishes DNA collection from fingerprint collection by arguing that "[u]nlike fingerprints, DNA can be used to investigate biological relationships between individuals."²²⁴ The court responded to that argument in a footnote by stating:

The possibility of an unintentional or intentional CODIS "hit" for Mitchell's biological relatives does not change our analysis. To begin with, Mitchell has not shown that he has standing to assert the Fourth Amendment rights of his relatives. Even if he did, the record does not contain any evidence of a possible search or investigation of Mitchell's relatives, and the claim is entirely speculative. In this respect, we also find it significant that CODIS is not designed for intentional familial searches and experts agree that searches of that type would not produce any useful information.²²⁵

In *Mitchell*, the court was correct in holding that Mitchell did not have standing to assert the Fourth Amendment rights of his relatives, as none of them were implicated in the case. However, the court is incorrect in its finding that CODIS is not designed for familial searches and that no useful information would not be produced from a familial search. A familial search is effectuated through the normal use and design of the CODIS system. The only difference between a normal DNA search and a familial DNA search is that the law enforcement officer is looking for a hit that has some of the sample DNA alleles in common,²²⁶ rather than a normal search where the law enforcement officer looks for a sample where all of the alleles are in common.²²⁷ Other than this minor difference, a familial search is conducted in the same manner as a regular CODIS search. Because of the similarities between the searches, CODIS is designed for familial searches and the court is incorrect in this finding.

Additionally, the court in *Mitchell* cites to a proposed rule by the Department of Justice as the basis for its claim that CODIS is not designed for a familial search.²²⁸ The federal rule states: "The current design of the DNA identification system does not encompass searches of this type against the *national* DNA index."²²⁹ This statement

²²³ *United States v. Mitchell*, 652 F.3d 387, 409 n.19 (3d Cir. 2011).

²²⁴ *Id.*

²²⁵ *Id.* at 409 n.19 (alteration in original).

²²⁶ Jessica D. Gabel, *Probable Cause from Probable Bonds: A Genetic Tattle Tale Based on Familial DNA*, 21 HASTINGS WOMEN'S L.J. 3, 18 (2010).

²²⁷ NIEDZWIECKI ET AL., *supra* note 90, at 2.

²²⁸ *Mitchell*, 652 F.3d at 409 n.19 (citing DNA-Sample Collection and Biological Evidence Preservation in the Federal Jurisdiction, 73 Fed. Reg. 74932, 74938 (Dec. 10, 2008) (codified at 28 C.F.R. pt. 28)).

²²⁹ DNA-Sample Collection and Biological Evidence Preservation in the Federal Jurisdiction, 73 Fed. Reg. 74932, 74938 (Dec. 10, 2008) (codified at 28 C.F.R. pt. 28) (emphasis added).

is accurate because familial DNA searches are not currently conducted in the national CODIS database and are conducted only at the state and local levels.²³⁰ Thus, the rule is not stating that the CODIS system is not equipped to run a familial search, it is instead stating that the national database does not perform familial searches. The CODIS system, therefore, is fully equipped to run a familial search, as it currently does at the state and local levels.²³¹ Since the court is referencing only a national familial DNA search, which is not the search at issue, this finding by the Third Circuit in *Mitchell* should be disregarded.

The court also stated that, had CODIS been equipped to conduct a familial search, the familial searches would not produce any useful information.²³² This is an understatement by the court because familial DNA searches provide law enforcement officers with one large piece of information - potential family members of a crime suspect. By identifying relatives of an arrestee, law enforcement officers are able to narrow their suspect pool at a faster rate.²³³ This gives law enforcement officers a potential lead in an investigation that may have gone cold. It also saves time and money because they are able to identify specific individuals to question.²³⁴ The information that is derived from a familial search can completely shape a criminal investigation because it provides officers with new information about a suspect that they would not have been investigating. When properly conducted, familial DNA searches have led to the identification and conviction of multiple suspects throughout the country.²³⁵ Thus, familial searches do lead to useful pieces of information that have a large impact on criminal investigations, and the contrary finding by *Mitchell* should be disregarded.

Moreover, the information that is provided by familial DNA testing and the Third Circuit's rationale in *Mitchell* demonstrates the slippery slope that is created by familial DNA testing. As previously stated, when *Mitchell* was decided in 2011, the Third Circuit believed that no useful information could result from familial DNA

²³⁰ *Frequently Asked Questions on CODIS and NDIS*, *supra* note 47, at 9.

²³¹ *Id.*

²³² *Mitchell*, 652 F.3d at 409 n.19 (citing DNA-Sample Collection and Biological Evidence Preservation in the Federal Jurisdiction, 73 Fed. Reg. 74932, 74938 (Dec. 10, 2008) (codified at 28 C.F.R. pt. 28)).

²³³ Robin Williams & Paul Johnson, *Inclusiveness, Effectiveness and Intrusiveness: Issues in the Developing Uses of DNA Profiling in Support of Criminal Investigations*, 33 J.L. MED. & ETHICS 545, 546 (2005).

²³⁴ *Id.*

²³⁵ James Rainey, *Familial DNA Puts Elusive Killers Behind Bars*, NBC NEWS (Apr. 28, 2018), <https://www.nbcnews.com/news/us-news/familial-dna-puts-elusive-killers-behind-bars-only-12-states-n869711> (using familial DNA to arrest murder suspect); Farnoush Amiri, *An Open-Source DNA Site Helped Lead to Mother's Arrest in 1981 Death of Baby in Ditch*, NBC NEWS (Mar. 11, 2019), <https://www.nbcnews.com/news/us-news/investigators-used-open-source-dna-database-solve-1981-cold-case-n981776> (matching familial DNA to arrest mother for murdering her child).

testing.²³⁶ Now, only nine years later, it has been demonstrated that invading an arrestee's personal privacy through familial testing does produce useful information for law enforcement.²³⁷ With rapid advancements in technology, it is important to recognize that the use of arrestee DNA to aid in law enforcement investigations will continue and increase the risk of a deeper invasion into the arrestee's personal privacy.²³⁸

Given that the Third Circuit in *Mitchell* relied on an improper analysis of the implications of a familial DNA search of an arrestee's DNA, the court's analysis on this issue should be disregarded when assessing the constitutionality of an arrestee familial DNA search. Instead, a familial search is the type of "technological advancement" that requires reconsideration of the Fourth Amendment analysis under *Mitchell*.²³⁹ In that case, Mitchell argued that the scope of the information that can be obtained from an arrestee's DNA sample is extraordinarily broad.²⁴⁰ Further, with technological advances, "junk DNA" could reveal more extensive information than is presently disclosed.²⁴¹ The court found that this possibility was "not unforeseeable."²⁴² The court relied upon the First Circuit's analysis of this issue stating:

[S]cientific advances might make it possible to deduce information beyond identity from the junk DNA that forms the thirteen-loci profiles stored in CODIS. Future government uses of the DNA profiles in CODIS could potentially reveal more intimate or private information about the profile's owner and depart from the uses for which the profiles were originally lawfully created and retained. In this case, however, these are merely hypothetical possibilities. . . . As in *Weikert*, "the possibility that junk DNA may not be junk DNA some day . . . does not significantly augment [Borolan's] privacy interest in the present case."²⁴³

²³⁶ *Mitchell*, 652 F.3d at 409 n.19.

²³⁷ *See supra* notes 238–240.

²³⁸ *See* Thomas Brewster, *Feds Force Suspect to Unlock an Apple iPhone X with Their Face*, FORBES (Sept. 30, 2018), <https://www.forbes.com/sites/thomasbrewster/2018/09/30/feds-force-suspect-to-unlock-apple-iphone-x-with-their-face/#3f0914861259> (describing a situation where a police officer forced a male in Columbus, Ohio, to unlock his iPhone through the use of facial recognition).

²³⁹ *Mitchell*, 652 F.3d at 408.

²⁴⁰ *Id.* at 407.

²⁴¹ *Id.*

²⁴² *Id.* at 408.

²⁴³ *Id.* (alteration in original) (quoting *Boroian v. Mueller*, 616 F.3d 60, 69 (1st Cir. 2010)).

The court indicated that the hypothetical possibilities were unsupported in the case and did not have substantial weight in the totality of the circumstances analysis.²⁴⁴ However, the court kept the door open to future advances by stating “[s]hould technological advancements change the value of ‘junk DNA,’ reconsideration of our Fourth Amendment analysis may be appropriate.”²⁴⁵

A familial search is exactly the “hypothetical possibility” that is referenced in *Mitchell*. Forensic scientists examine junk DNA to create a DNA profile of an arrestee.²⁴⁶ The original profile does not contain any genetic traits,²⁴⁷ instead it contains a series of numbers which represent an analysis of specific locations on the arrestee’s chromosome.²⁴⁸ However, as previously indicated, a familial search of junk DNA does identify genetic traits of the arrestee because it links them to possible relatives. This revelation of genetic traits changes the value of junk DNA, and following the analysis of the Third Circuit in *Mitchell*, requires reconsideration of its Fourth Amendment analysis.

C. Ohio’s Expungement Process Opens the Door to Familial DNA Searches After Acquittal

Ohio’s practice of conducting familial DNA searches on arrestee DNA violates the Fourth Amendment and the practice must be deemed unconstitutional by the Ohio Supreme Court. If familial searches of arrestee DNA continue, the searches can possibly expand past the time frame where individuals are simply arrestees waiting to prove their case at trial, and can continue even after they have been found not guilty, had their convictions overturned, or had charges against them dropped.

Specifically, Ohio’s DNA expungement process allows the state to continue familial DNA searches even if an arrestee was found not guilty of any crimes. Expungement is the process by which an individual’s DNA sample is removed from CODIS,²⁴⁹ and under federal law all states that participate in CODIS are required to establish DNA expungement provisions.²⁵⁰ 42 U.S.C. § 14132(2)(A) requires a state

²⁴⁴ *Id.*

²⁴⁵ *Id.*

²⁴⁶ *Haskell v. Harris*, 669 F.3d 1049, 1051 (9th Cir. 2012).

²⁴⁷ *Id.*

²⁴⁸ *Id.*

²⁴⁹ OHIO CODIS OPERATING PROCEDURES, *supra* note 63, at 26.

²⁵⁰ 34 U.S.C. § 12592(d)(2)(A)(ii) (2017) (“As a condition of access to the index described in subsection (a), a State shall promptly expunge from that index the DNA analysis of a person included in the index by that State if – the person has not been convicted of an offense on the basis of which that analysis was or could have been included in the index, and the responsible agency or official of that State receives, for each charge against the person on the basis of which the analysis was or could have been included in the index, a certified copy of a final court order establishing that such charge has been dismissed or has resulted in an acquittal or that no charge was filed within the applicable time period.”).

to expunge an individual's DNA from CODIS once the state receives a "certified copy or final court order" establishing that a conviction was overturned, the defendant was acquitted, or that no charge was filed within the applicable period.²⁵¹ Although the law provides these individuals with the opportunity to have their DNA expunged, the reality is that very few profiles are actually removed.²⁵² This is because the law is open-ended and only provides mere guidelines that the states must include in their expungement provisions rather than an established process for DNA expungement.²⁵³

Looking at 42 U.S.C. § 14132(2)(A) on its face, an individual could reasonably assume that the process of submitting the certified copy or final order of the non-conviction would be automatically processed by the State upon non-conviction. However, in Ohio the individual is burdened with initiating his or her own DNA expungement process.²⁵⁴ Ohio's lengthy DNA expungement process is outlined in the Ohio Revised Code § 2953.52.²⁵⁵ Under this section, any person who is found not guilty of an offense by a jury or court, who is a named defendant in a dismissed complaint, indictment or information, or against whom a no bill is entered by a grand jury may apply to the court for an order to seal his or her official records.²⁵⁶ After receiving the application, the court sets a hearing on the application where it will "weigh the interests of the person in having the official records pertaining to the case sealed against the legitimate needs, if any, of the government to maintain those records."²⁵⁷ If the court finds that the record should be sealed, it will issue an order to the superintendent of the Ohio Bureau of Criminal Investigation to seal the individuals record and any DNA specimens, DNA records, and DNA profiles associated with the case.²⁵⁸

The issues involved with Ohio's DNA expungement process presents additional concerns that in some ways outstrips the current issue. These issues are important to discuss because the Ohio Bureau of Criminal Investigation is given the authority to run familial searches until it is ordered to remove the DNA from their CODIS database.²⁵⁹ Tom Stickrath, former superintendent of the Ohio Bureau of Criminal

²⁵¹ *Id.*

²⁵² Elizabeth E. Joh, *The Myth of Arrestee DNA Expungement*, 164 U. PA. L. REV. ONLINE 51, 55 (2015).

²⁵³ 34 U.S.C. § 12592(d)(2)(A)(ii).

²⁵⁴ *Ohio Public Defenders Say That State Needs to Expunge DNA Samples of Innocent People*, INNOCENCE PROJECT (Aug. 14, 2017), <https://www.innocenceproject.org/expunge-dna-innocent-ohio-people/>; see OHIO REV. CODE ANN. § 2953.52(B)(3) (2020).

²⁵⁵ § 2953.52.

²⁵⁶ *Id.* § 2953.52(A).

²⁵⁷ *Id.* § 2953.52(B)(2)(d).

²⁵⁸ *Id.* § 2953.52(B)(3).

²⁵⁹ See OHIO CODIS OPERATING PROCEDURES, *supra* note 63, at 27 ("For court orders indicating a sample shall be expunged pursuant to 2953.52, the laboratory shall destroy the

Investigation, has publicly stated that after the Bureau creates a DNA profile in CODIS it does not track the legal outcome of the case.²⁶⁰ By not doing so, the Bureau relies on the state to follow its process for DNA expungement and inform it when a DNA profile is to be removed from CODIS. Ohio's expungement process, however, is flawed and creates additional issues that arrestees face when their DNA profile is exposed to familial DNA searches.

First, by placing the burden of initiating the expungement process upon the individual, Ohio receives the benefit of increasing its CODIS databank by exploiting individuals who are unaware of the DNA expungement process or lack the resources to pursue the process on their own.²⁶¹ This effect was demonstrated in a 2012 study of states with DNA expungement laws that are identical to Ohio which showed that "when individuals bear the burden of initiating the expungement process, very few expungements actually occur and profiles are retained of individuals who were never formally charged with a qualifying offense or whose case resulted in acquittal or dismissal."²⁶²

The lack of expungements that actually occur suggests that not only does Ohio conduct familial DNA searches of arrestees who have not yet gone to court, Ohio also conducts familial DNA searches of individuals who have been wrongly arrested and have not been found guilty of any criminal activity. The large amount of former arrestee DNA that remains to be searched in CODIS is a gross deviation from the original intent of the courts in both *Maryland* and *Mitchell* when they first legalized arrestee DNA collection.²⁶³ Both courts authorized arrestee DNA collection for the purpose of facilitating the need of law enforcement officers to identify persons taken into custody in safe and accurate way.²⁶⁴ Ohio has since expanded arrestee DNA collection past its original purpose and continually uses it to affect an individual after he has officially been deemed not guilty by subjecting him and his family members to familial DNA searches. This is a substantial step away from the original intent behind arrestee DNA collection, and Ohio's DNA expungement process illustrates the further implications and searches that can arise from unconstitutional familial searches of arrestee DNA.

Second, even if an individual does apply for DNA expungement, his or her DNA profile is exposed to normal and familial DNA searches for an extensive period of time before the profile is actually expunged. As previously shown, DNA expungement involves a lengthy process that involves several steps and actions by multiple persons

physical sample and delete the DNA profile from the software. The offender's DNA Collection Form and the CODNA information shall be removed.").

²⁶⁰ Rebecca Beitsch, *DNA Upon Arrest: Solving Cold Cases or Presuming Guilt?*, PEW (Jan. 12, 2017), <https://www.pewtrusts.org/en/research-and-analysis/blogs/stateline/2017/01/12/dna-upon-arrest-solving-cold-cases-or-presuming-guilt>.

²⁶¹ Joh, *supra* note 252, at 58.

²⁶² Julie Samuels et al., *Collecting DNA from Arrestees: Implementation Lessons*, 270 NAT'L INST. JUST. J. 18, 23 (2012).

²⁶³ See *Maryland v. King*, 569 U.S. 435, 465–66 (2013).

²⁶⁴ See *id.*

before a DNA profile is officially removed from CODIS.²⁶⁵ The Ohio Revised Code does not include a time frame in which the process must be completed.²⁶⁶ This allows the State to drag out the process and continue conducting normal and familial searches of the former arrestee's DNA profile for as long as it chooses. These issues, therefore, demonstrate the further implications that will occur if Ohio continues to violate the Fourth Amendment and conduct familial DNA searches of arrestee DNA.

IV. CONCLUSION

Although Leon Edwards was acquitted of all criminal activity, the residue of his arrest remained in Ohio's CODIS database for over a year and potentially still remains there today. Ohio unconstitutionally subjected Edwards and his family to familial DNA searches and continues to violate the Fourth Amendment rights of felony-arrestees today.

The practice of conducting familial DNA searches is currently expanding into more states. With this expansion brings the implication that arrestees all around the country will be subject to unconstitutional DNA searches without, if ever, being convicted of a crime. These searches are unconstitutional and are a violation of arrestee's Fourth Amendment rights against unreasonable searches and seizures. Arrestees have a reasonable expectation of privacy in the information that is obtained from their DNA profile in a familial DNA search, and the government is using that information to link their blood relatives to unsolved crimes. This type of fishing for evidence of crime goes beyond all governmental interests in collecting arrestee DNA and goes against the intention of the Supreme Court when it specifically precluded the use of arrestee DNA in familial DNA searches. Further, Ohio's DNA expungement procedures provide the possibility that arrestee DNA may never be removed from CODIS, which would subject arrestees to familial DNA searches in perpetuity, even after non-conviction. Ohio must amend its familial DNA search protocol to exclude DNA from felony arrestees. If it does not, all arrestees face the possibility of limitless, unconstitutional searches for the rest of their lives regardless of the outcome of their case.

²⁶⁵ See OHIO REV. CODE ANN. § 2953.52 (2012).

²⁶⁶ § 2953.52.