

New York County Clerk's Index No. 151522/2018

New York Supreme Court

APPELLATE DIVISION—FIRST DEPARTMENT



In the Matter of the Application of

TERRENCE STEVENS and BENJAMIN JOSEPH,

Petitioners-Appellants,

For a Judgment Pursuant to Article 78 of the Civil Practice Law and Rules

—against—

THE NEW YORK STATE DIVISION OF CRIMINAL JUSTICE SERVICES, THE
NEW YORK STATE COMMISSION ON FORENSIC SCIENCE, MICHAEL C.
GREEN, in his official capacity as Executive Deputy Commissioner of the Division of
Criminal Justice Services and Chairman of the Commission on Forensic Science, and
THE NEW YORK STATE COMMISSION ON FORENSIC SCIENCE DNA
SUBCOMMITTEE,

Respondents-Respondents.

Case Nos. 2020-03746, 2021-00560

**BRIEF OF *AMICUS CURIAE* BRENDAN PARENT IN SUPPORT
OF PETITIONERS-APPELLANTS**

Brendan Parent, Esq.
NYU Grossman School of Medicine
227 East 30th Street
7th Floor, 721
New York, NY 10016
Brendan.Parent@nyulangone.org
(646) 501-2743

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INTEREST OF AMICUS CURIAE

Amicus curiae Brendan Parent is an attorney and an assistant professor at NYU Grossman School of Medicine who specializes in medical ethics. His scholarship for the past fifteen years has focused on the ethical and legal concerns that arise in the development and application of genetics technologies. He is a fellow of the Center for Genetics and Society, and a member of the Tri-Sci Embryonic Stem Cell Research Oversight Committee. He previously served as special legal advisor to the New York Task Force on Life and the Law, a New York State agency that advises the State's Department of Health and the Legislature on issues at the intersection of ethics, law, science, medicine, and technology.

Professor Parent has published articles on the ethical and legal issues arising from genetics technologies in peer-reviewed academic journals, and has edited volumes on ethical challenges of emerging technologies; his work has also been featured in *The Chicago Tribune*, *The New York Times*, *The Guardian*, and on National Public Radio. Professor Parent has led international working groups, advised governmental agencies, and consulted for international companies on the ethical use and management of genetics technologies and databanks. And he has taught hundreds of undergraduate students, master's students, law students, and medical students about the ethics and law of forensic genetics.

SUMMARY OF ARGUMENT

The Division of Criminal Justice Services (DCJS)' authorization of familial searching oversteps a clear line—drawn by the New York Legislature. The Legislature permitted the use of New York's database for exact genetic matching. The Legislature also allowed certain investigations on the basis of inadvertent “partial matches.” The Legislature did not, however, allow intentional application of separate probability algorithms and lineage testing (“familial searching”) in order to identify potential biological relationships between the sources of Databanked samples and evidentiary samples.

The line dividing what the Legislature permitted (e.g., partial matches) and what it did not permit (i.e., familial searching) is not arbitrary. The technical distinction between inadvertent matching and intentional searching conforms to an ethical line that is recognized by scholars and policy analysts in the legal, ethical, and scientific fields. Our societal agreement is that individuals who are convicted of certain crimes have reduced expectations of their rights to genetic privacy. A byproduct of this agreement is that our society's disproportionate targeting, prosecuting, and convicting of people of color is reflected in forensic DNA databases. But familial searching breaches this agreement because it intentionally seeks out individuals whose DNA information is not in a database, and who do not have diminished privacy expectations in their DNA—solely because they are

biologically related to someone who does. The byproduct of this breach is an unethical enhancement of society's disproportionate targeting, prosecuting, and convicting people of color.

ARGUMENT

I. Supreme Court Incorrectly Decided That Familial Searching Is Merely An “Incremental Change In Methodolog[y]” From The Existing Partial Match Program.

The Supreme Court concluded that the difference between familial searching and partial matching is merely “incremental.” People who work in the area of DNA matching, and in particular those who study the policies and ethics of DNA matching systems, do not view these practices that way. They regard them as two distinct types of searches, with a clear line between them, and implicating clearly different ethical concerns.

Forensic DNA databases can be used to compare evidentiary DNA samples to profiles in the database to investigate whether the DNA of a convicted offender is present at the crime scene. The ethico-legal foundation for setting up and using such databases is that convicted offenders have a “diminished” expectation of genetic privacy. *See, e.g., Nicholas v. Goord*, 430 F.3d 652, 669 (2d Cir. 2005). Because one's DNA is similar to the DNA of one's relatives, DNA databases can sometimes help connect evidentiary samples to people who were never in the database. This introduces greater investigatory power and greater risk of unjustified privacy

invasion. And because DNA is biological, it risks heightening the scrutiny that is applied to individuals solely based on their family, and therefore their ethnicity.

DCJS' decision to permit indirect associations, or "partial matching," of evidentiary samples to the Combined DNA Index System (CODIS) databank reflects the physical reality that many evidentiary samples do not generate perfect DNA profiles. When we leave DNA on a door handle or myriad other objects or surfaces, over time it degrades and mixes with the DNA of others. As a result, collecting and analyzing any particular sample from an object or a surface where we previously left DNA will only very rarely detect our full DNA profile as it exists in our body. The same dynamic is at play when investigators collect a DNA sample from an object found at a crime scene. In such cases, the search stringency with which the imperfect sample's DNA information is compared to the database DNA information is lowered to determine whether the imperfect sample matches, at a lower number of locations, with one or more offender profiles. If further investigation of the partial match does not confirm that the sample originated from an offender in the database, there remains the possibility (among other possibilities) that the sample originated from someone related to the individual in the database for whom there was a partial match. This is an inadvertent discovery of a potential family relationship, secondary to the intention of finding a direct match and made entirely through the use of functionality built into CODIS.

Partial matches can also be the product of arbitrarily similar genetics between unrelated individuals. We all share a significant amount of our DNA in common, and it is possible that a forensic sample is similar to a database profile not because of any biological relationship, but instead due to chance. Accordingly, a partial match requires a confirmatory test such as Y-STR analysis (directly tracing paternal lineage) or mtDNA analysis (directly tracing maternal lineage). Partial matching will thus always be limited in its investigatory value. Knowing that partial matches could be dumb-luck hits to unrelated individuals, investigators must decide whether the partially matched offender information is worth the time and effort to apply for access, *see* 9 NYCRR § 6192.3(g), when the necessary lineage tests might still show no relationship. This limitation sets a high bar, and helps ensure the use of DNA databases is focused on its intended use—finding exact matches.

Familial searching is yet a third step, and a distinct slip from the original intended use of forensic DNA databases. It is recognized as a distinct and different tool from “partial matching.” Unlike partial matching, which is performed within CODIS and is an inadvertent byproduct of exact matching, familial searching is a *deliberate* and in-the-first-instance application of software employing genetic algorithms, to determine the likely degree of relatedness, and lineage testing, to reduce false positives. *See* Sara Debus-Sherrill & Michael B. Field, ICF, *Understanding Familial DNA Searching: Policies, Procedures, and Potential*

Impact 2 (2017). Familial searching is not tied to exact matching and is designed specifically to determine potential biological relationships to evidentiary samples. The net that is cast for partial matching investigations is calibrated to catch exact matches, and might also catch some genetically similar people who might or might not be related to the biological source of the evidentiary sample. The net used for familial searching, by contrast, is precision-tailored to catch family members, based on degree and type of biological relatedness. Familial searching lowers the bar for similarity between the “forensic” DNA and the DNA whose information is in the database.

This is not only a technical distinction; it is a critical moral distinction in terms of both intention and outcome, and one that legislatures have recognized. *See, e.g.*, Md. Code Ann., Pub. Safety § 2-506(d) (“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.”); D.C. Code § 22-4151(b) (“DNA collected by an agency of the District of Columbia shall not be searched for the purpose of identifying a family member related to the individual from whom the DNA sample was acquired.”). Partial matching that leads to potential relatives of databased individuals is an unintended side effect of a comparison process intended to find a direct match with an databased individual. Familial searching, meanwhile,

is a specialized system solely intended to identify family members of databased individuals, rather than seeking a direct match. By only allowing exact matching and partial matching, the regularity with which family members are sought, and thus have their rights to genetic privacy violated, will remain limited by the method's technical inefficiency for this purpose. Familial searching encourages additional pursuit of family members and expands the degree to which our government is authorized to violate our rights to genetic privacy without reducing our expectations to this right. This practice undermines the social contract that justifies forensic DNA databases.

II. We Have Privacy Rights To Our Genetic Information, And Allowing Familial Searching Encourages The Violation Of These Rights.

Genetic information is uniquely identifying and can reveal highly sensitive personal information, such as information about physical appearance, parentage, molecular biology variation, genetic susceptibility to disease, and other individual biological information. This is why forensic databases focus on genomic regions called short tandem repeat (STR) sequences that, as far as we know, do not reveal unique phenotypic features—meaning, they focus on portions of DNA that are not thought to relate to physical appearance or other discernable biological features.¹

¹ See, e.g., Nicole Wyner et al., *Forensic Autosomal Short Tandem Repeats and Their Potential Association with Phenotype*, 11 *Frontiers Genetics* 1 (2020) (noting that it is generally accepted in the field that genetic markers used in forensic applications are not predictive of phenotype).

Because we are constantly shedding DNA, even noncoding regions tell stories about where we go and what we do, based on where the DNA is found. We do not permit unfettered access to and testing of the DNA all around us. Instead of setting up such a surveillance state, court decisions and legislation generally dictate that our right to genetic privacy should only be reduced by virtue of involvement in criminal activity, confirmed by conviction. *Nicholas*, 430 F.3d at 669 (recognizing a “government interest in obtaining identifying information from *convicted* offenders” (emphasis added)). The corollary is that without a conviction, our right to privacy—including our right to control information about ourselves, our right to dignity, and our right to intimacy—generally outweighs the criminal investigatory value of genetics. *See Maryland v. King*, 569 U.S. 435, 462–63 (2013) (“[S]earches of . . . the public at large . . . intrude upon substantial expectations of privacy.”).

Allowing familial searching paves the way for the development of unauthorized “rogue” genetic databases composed of profiles from people not convicted of crimes, directly contravening the foundational principle of offender databases. This is of particular concern in New York City, which manages a database of more than thirty thousand people, many of whom have never been convicted of a crime and are not suspects in any ongoing investigations. *See Erin Durkin, New York City Said it Would Purge Its DNA Database. A Year Later, It’s Expanded.*, Politico (Feb. 23, 2021), <https://www.politico.com/states/new->

york/albany/story/2021/02/23/the-city-said-it-would-purge-its-dna-database-a-year-later-its-expanded-1364993. It should be expected that law enforcement will use such information and tools to increase investigatory capacity. It is thus the duty of regulatory bodies like DCJS to curtail the relevant incentives. Authorizing familial searching sends the message that this kind of surveillance expansion is not only acceptable, but encouraged.

III. The Allure Of Genetics As Seemingly “Objective” Evidence Can Impede Actually Objective Investigation, And Familial Searching Would Further Entrench The False Notion Of Genetic Objectivity.

Because each of our genetic profiles is unique, forensic use of genetic information is touted as objective or even “infallible.” Meghan J. Ryan, *The Privacy, Probability, and Political Pitfalls of Universal DNA Collection*, 20 SMU Sci. & Tech. L. Rev. 3, 4 (2017). But there are myriad technical errors that could cause a sample to appear to come from a particular individual or his relative, when in fact, the source of the sample is entirely unrelated. For instance, “contaminated samples can lead to false positives and false negatives, clerical errors can lead to incorrectly logged samples and poor data entry, and crime labs can misinterpret old, small, or mixed samples from multiple individuals.” Osagie K. Obasogie & Troy Duster, *All That Glitters Isn’t Gold*, in *Beyond Bioethics: Toward a New Biopolitics* 428, 432 (Osagie K. Obasogie & Marcy Darnovsky eds., 2018); *see also* Sheldon Krimsky & Tania Simoncelli, *A New Era of DNA Collections: At What Cost to Civil Liberties?*,

Am. Const. Soc’y (Sept. 2007), <https://sites.tufts.edu/sheldonkrimsky/files/2018/05/pub2007NewEraofDNACollections.pdf>.

In addition to technical errors, kinship thresholds are a necessary component of familial searching, which are subjective determinations about the likelihood of relatedness between an evidentiary sample and an offender profile. *See, e.g.*, 9 NYCRR § 6192.3(j)(2) (instructing laboratories to conduct familial searches using whatever “established threshold value(s)” the DNA Subcommittee and the Commission “approve[]”). One lab might ascribe a cousin relationship where another would ascribe no relationship. But the allure of genetic objectivity can incite overlooking these kinds of shortcomings and encourage unjustified targeting of relatives of databased offenders, especially if no other leads are promising.

Even if an evidentiary sample is accurately genetically linked to an individual, the mere presence of a person’s genetic information in a sample does not mean that the person was involved in the crime, or even present at the crime scene at the time of the crime, or even ever present at the crime scene at all—the sample could have been brought to the scene on someone’s clothes or other personal effects, and could have been brought well before the crime. For example, a sperm cell fraction from a vaginal swab could indicate a relative in the offender database, and through follow-up investigation reveal the identity of the individual from whom the sperm originated. But this sample may have originated from someone who had consensual

sexual relations with the victim and is unconnected to the crime. In this scenario, familial searching has implicated an innocent person, and has involved that person's innocent family members in the investigation. These individuals have had their privacy rights intruded upon, exposing intimate information. These individuals also have the right to be treated as innocent until proven guilty. But the allure of genetic objectivity can cloud the ethical obligation to ascribe reasonable doubt to these individuals. The presence of genetic material might be more readily viewed as evidence of guilt than other forms of evidence simply because of a more concrete link to an individual person—more concrete than even fingerprint evidence. See Jennifer L. Mnookin, *Fingerprint Evidence in an Age of DNA Profiling*, 67 *Brook. L. Rev.* 13, 38–39 (2011); see generally Brooke G. Malcom, Comment, *Convictions Predicated on DNA Evidence Alone: How Reliable Evidence Became Infallible*, 38 *Cumb. L. Rev.* 313 (2008). Familial searching enables the development of genetic links to individuals where they would not exist otherwise, implicitly encouraging focus on this evidence over other forms of investigation.

IV. Implicating A Person In A Crime Through Familial Genetic Evidence Is Morally Distinct From Implicating A Person Through Other Kinds Of Indirect Or Family Evidence.

Any evidence at a crime scene could eventually lead to relatives of one suspect, but genetic information has uniquely unacceptable consequences for how we view biologically related individuals and criminality. If an investigation finds a

unique kind of grass in the tread of a boot at the crime scene, that grass might be traced to a few homes in the surrounding neighborhood. The investigators will likely question the people who live in those homes. Or if a wallet photo of a sports team is found, the investigators might track down and question the members of the team. When investigations like these lead to a suspect, they do not connect two biologically related individuals for potential involvement in a crime simply by virtue of one individual's prior involvement in a crime. When familial searching leads to a suspect, this process inevitably connects a person convicted of crime (the prior offender in the database) to the new, biologically related suspect, solely by virtue of that biological relationship.

The allure of genetic objectivity combined with the confirmed genetic relationship to a person previously convicted can reinforce false and dangerous notions of genetic criminality for which there is no scientific basis. The bases for criminal behavior are plural and deeply nuanced, largely stemming from traumatic and disruptive life events. See Ehor Boyanowsky, *Crime and Criminality* 127–44 (2020). Repeated use of familial searching would train investigators to view heredity as a basis of criminality, if not to overlook legitimate bases altogether, as repeated experiences would point to suspects who are family members of convicted offenders. Familial searching can bias investigators to assume that family members of offenders are more likely to commit crimes, regardless of the presence of genetic

evidence. Exacerbating these concerns are biases underlying the over-targeting, prosecution, and conviction of people of color in the United States. These biases bleed into the composition of DNA databanks like New York's because "DNA profiles from Black persons are collected at two to three times the rate of White persons," and "DNA profiles from Black persons are collected and stored in [each] state[']s] database at two to three times the rate of Black persons in the population." Erin Murphy & Jun Ton, *The Racial Composition of Forensic DNA Databases*, 108 Calif. L. Rev. 1847, 1847, 1851 (2020). Allowing these biases to integrate into practice, familial links could become the primary bases for investigation, overshadowing legitimate evidence. And using DNA databases that are overwhelmingly populated by people of color to find family suspects will reflect and reinforce inequities in the criminal justice system. A society that condones familial searching can unintentionally reinforce the false relationships between genetics and criminality and between race and criminality.

V. The Line Has Been Drawn Short Of Familial Searching, And Must Remain There If We Believe In Equality Under The Eyes Of The Law.

Forensic DNA databases were built to focus on our unique genetic profiles and the ability to match evidentiary samples to a database of convicted offenders. Integrating this technology into the criminal justice system then posed one of the most difficult cases of limit-setting. With the prospect of expanding the ambit of DNA databases to include familial identification methods, several state legislatures

rejected the premise on the grounds that we have privacy rights to our genetic information. *See, e.g.,* Michael B. Field et al., *Study of Familial DNA Searching Policies and Practices* 35 (2017) (“The other main concern in Maryland around FDS was a potential violation of citizens’ Fourth Amendment privacy rights. . . . Family members of [convicted] offenders have not given up their rights, argued some . . . in Maryland, and should not be subject to any such oversight.”). These rights have been balanced against the benefits of additional criminal investigation tools and the rights of innocent citizens have been prioritized. Allowing familial searching is an explicit statement that privacy rights no longer supersede. But familial search tools are not an objective revelation. They are limited by technical challenges rooted in human error similar to those that plague all forms of forensic investigation. They are also limited by the grossly unrepresentative pool of participants that are currently in the database. The decision to authorize familial searching is a statement that the rights of people of color to genetic privacy do not outweigh the need to target them and their relatives for criminal investigation.

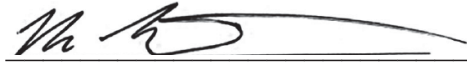
CONCLUSION

It is possible that implementing a universal DNA database that includes all citizens could help resolve the concerns laid out here by subjecting everyone to equal scrutiny during investigation, *see* Ryan, *supra*, at 7, but this is not the society in which we live. *Cf. King*, 569 U.S. at 481 (Scalia, J., dissenting) (“Solving unsolved

crimes is a noble objective, but it occupies a lower place in the American pantheon of noble objectives than the protection of our people from suspicionless law-enforcement searches.”). Such a system would run counter to our country’s culture of default respect for privacy and freedom from governmental intrusion, but at least it would promise consistency. Justice requires consistency in how we treat the members of our society, if not treatment that recognizes and makes amends for historic wrongdoing. With regard to forensic genetics, we must decide whether consistency requires continuing under the notion that only convicted offenders have reduced expectation of genetic privacy, or if it requires moving to a surveillance state in which we all have a reduced expectation of privacy. Neither is perfect and both retain hurdles to achieving social justice for historically mistreated populations. Familial searching is inconsistent with the current framework that purports to grant most citizens with clean records a right to privacy. It is also an unethical perpetuation of disproportionate policing and incarceration of people of color under the guise of objectivity. And it is regarded as distinct from “partial match” searching permitted by the Legislature.

Dated: September 13, 2021

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Brendan Parent", is written over a horizontal line.

Brendan Parent, Esq.

Amicus Curiae

227 East 30th Street

7th Floor, 721

New York, NY 10016

Brendan.Parent@nyulangone.org

(646) 501-2743

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