

Topical Bibliographic Resource:

DNA Identification Research Funded by the National Human Genome Research Institute Ethical, Legal, and Social Research Program

The ELSI Program has allocated a portion of its research portfolio to the support of studies that address the issues that arise when DNA is analyzed specifically for the purpose of individual identification or the unmasking of genetic relationships among individuals. Here, we provide a listing of publications or other products resulting from grants the Program has supported on this topic. This resource is not intended to be comprehensive; rather, it highlights some of the main products of grants that have been funded in this area.

This resource is divided into six sections:

- **DNA in Criminal Forensics: Earliest Foundational Studies**
- **DNA in Criminal Forensics: More Recent Influential Studies**
- **DNA in Criminal Forensics: Investigative Genetic Genealogy**
- **DNA in Immigration Proceedings**
- **DNA in Missing and Unidentified Persons Cases**
- **DNA in the Investigation of Family Relationships**

Publications or other grant products within each section are listed in chronological order. Citations include the PubMed ID, with a link to the PubMed entry where available. The Methodology column indicates the method(s) used in the research to give readers a sense of the type of data that will be found in the article. In the case of publications reporting on studies that used multiple methods, an attempt has been made to capture the primary method(s) used. These designations are meant as a rough guide only. In cases where the methodology was not easily categorized or where a wide range of methods were used, this column has been left blank. For this reason, books and dedicated special journal issues have not been assigned a category.

Below is a brief aid to what is included in each Methodology category.

Method	Description
Commentary	Letter/policy forum/correspondence
Conference	Conference proceedings or summary
Conceptual Analysis	Historical, philosophical, or other analytical/conceptual research
Structured Group Deliberations	Deliberative Discourse, Deliberative Democracy, Delphi process, roundtable discussions
Focus Group	Focus group research
Interviews and Ethnography	Analysis of data from interviews or ethnographic observations
Legal/Policy Analysis	Analysis of relevant policy or law
Literature review	Review and analysis of relevant literature
Computational/Statistical Analysis	Statistics, modeling, secondary data analysis
Survey	Written, online, or in-person surveys

The last column in each row provides the NIH grant number associated with the product. The grant number can be used to search the ELSI Research Program Grants, Publications, and Products database [\[link\]](#) for additional information about each grant, including the grant abstract, period of funding, grantee institution, and other grant products.

DNA in Criminal Forensics: Earliest Foundational Studies

The area of criminal forensics is where the power of DNA to serve as a unique identifier of individuals was first fully appreciated and in which the technology has had by far the most widespread application to date. Initial skepticism about the fundamental reliability of DNA testing for law enforcement use - documented and described in some early ELSI-funded historical research - was largely put to rest in 1992, when the National Academy of Sciences, with support from the ELSI program, issued a report that summarized the potential value of the technology for both exonerating and positively identifying suspects in criminal cases. The primary focus of early ELSI studies was on issues raised by the use of DNA for positive identification (as distinct from exoneration, a less contentious application) and on the privacy and civil liberties implications of the then-rapidly rising number of forensic DNA databases.

In the early 2000s, ELSI-funded research on the use of DNA in criminal forensics culminated in the publication of a special symposium issue of the American Journal of Law, Medicine, and Ethics. Although many of the issues addressed in those studies and other early studies have since been resolved by the courts, other issues - including the potential for DNA testing in the criminal justice context to exacerbate longstanding racial disparities in the criminal justice system - have persisted, and continue to provide fertile ground for ELSI research.

<i>Citation PMID Link</i>	<i>Article Type</i>	<i>Methodology</i>	<i>NIH Grant Number</i>
National Research Council (US) Committee on DNA Technology in Forensic Science, DNA Technology in Forensic Science. 1992, Washington, D.C.: National Academies Press. LINK	Book		Y01OD40065
Nelkin, D. After Daubert: The relevance and reliability of genetic information. CARDOzo Law Review. 1993;15:2119. LINK	Law & Policy Review	Legal/Policy Analysis	R021HG000447
Annas GJ. Privacy Rules for DNA Databanks: Protecting Coded 'Future Diaries'. Journal of the American Medical Association. 1993;270(19):2346-50. doi: 10.1001/jama.1993.03510190102034 %J JAMA. PMID: 8230598 (see also Genetic Privacy Act and Commentary)	Journal Article	Legal/Policy Analysis	DE-FG02-93ER61626*
McEwen J, Reilly P. A review of state legislation on DNA forensic data banking. Am J Hum Genet. 1994;54(6):941-58. Epub 1994/06/01. PubMed PMID: 8198138 ; PubMed Central PMCID: PMC1918190. https://www.osti.gov/biblio/6974685-review-state-legislation-dna-forensic-data-banking	Journal Article	Legal/Policy Analysis	DE-FG02-91ER61237*

Frankel MS, Teich AH. **The Genetic Frontier: Ethics, Law, and Policy**: American Association for the Advancement of Science; 1994.

McEwen JE. **Forensic DNA data banking by state crime laboratories**. Am J Hum Genet. 1995;56(6):1487-92. PubMed PMID: [7762572](https://pubmed.ncbi.nlm.nih.gov/7762572/). <https://www.osti.gov/biblio/92007-forensic-dna-data-banking-state-crime-labotaories>

National Research Council. The Evaluation of Forensic DNA Evidence. Washington, DC: The National Academies Press; 1996. 272 p. PMID: [25121324](https://pubmed.ncbi.nlm.nih.gov/25121324/).

Human DNA: law and policy: international and comparative perspectives. In: Knoppers BM, Laberge CM, Hirtle M, Greely HT, editors. The Hague: Kluwer Law International; 1997.

Smith EJ, Sapp WJ. **Plain Talk about the Human Genome Project: A Tuskegee University Conference on Its Promise and Perils ... and Matters of Race**: Tuskegee University; 1997.

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Book		R13HG000119
Journal Article	Legal/Policy Analysis	DE-FG02-91ER61237*
Book		Y01OD040065
Book		R01HG01255
Book	Conference	Y01HG00019
Book Chapter	Interviews and Ethnography	K01HG002883

Cho MK, Sankar P. **Forensic genetics and ethical, legal and social implications beyond the clinic.** Nat Genet. 2004 Nov;36(11 Suppl):S8-12. doi: 10.1038/ng1594. PMID: [15510102](https://pubmed.ncbi.nlm.nih.gov/15510102/); PMCID: PMC2271138.

Cho MK, Sankar P. **Reply to "Getting the science and the ethics right in forensic genetics".** Nature Genetics. 2005;37(5):450-1. doi: 10.1038/ng0505-450. PMID: [15858585](https://pubmed.ncbi.nlm.nih.gov/15858585/).

Noble AA. **DNA Fingerprinting and Civil Liberties. The Journal of Law, Medicine & Ethics. 2006;34(2):149-152. doi: 10.1111/j.1748-720X.2006.00023.x. PMID: [16789939](https://pubmed.ncbi.nlm.nih.gov/16789939/).

Rothstein MA, Talbott MK. **The Expanding Use of DNA in Law Enforcement: What Role for Privacy?** The Journal of Law, Medicine & Ethics. 2006;34(2):153-164. doi: <https://doi.org/10.1111/j.1748-720X.2006.00024.x>. PMID: [16789940](https://pubmed.ncbi.nlm.nih.gov/16789940/)

Maclin T. **Is Obtaining an Arrestee's DNA a Valid Special Needs Search Under the Fourth Amendment? What Should (and Will) the Supreme Court Do?** The Journal of Law, Medicine & Ethics. 2006;34(2):165-187. doi: <https://doi.org/10.1111/j.1748-720X.2006.00025.x>. PMID: [15938073](https://pubmed.ncbi.nlm.nih.gov/15938073/)

Journal Article	Conceptual Analysis	R01HG003191
Journal Article	Commentary	R01HG003191
Special Journal Issue		R01HG002836
Special Journal Issue	Conceptual Analysis	R01HG002836
Special Journal Issue	Legal/Policy Analysis	R01HG002836

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Simoncelli T, Steinhardt B. **California's Proposition 69: A Dangerous Precedent for Criminal DNA Databases.** The Journal of Law, Medicine & Ethics. 2006;34(2):199-213. doi: <https://doi.org/10.1111/j.1748-720X.2006.00027.x>. PMID: [16789943](https://pubmed.ncbi.nlm.nih.gov/16789943/)

Etzioni A. **A Communitarian Approach: A Viewpoint on the Study of the Legal, Ethical and Policy Considerations Raised by DNA Tests and Databases.** The Journal of Law, Medicine & Ethics. 2006;34(2):214-221. doi: <https://doi.org/10.1111/j.1748-720X.2006.00028.x>. PMID: [16789944](https://pubmed.ncbi.nlm.nih.gov/16789944/)

Bieber FR. **Turning Base Hits into Earned Runs: Improving the Effectiveness of Forensic DNA Data Bank Programs.** The Journal of Law, Medicine & Ethics. 2006;34(2):222-233. doi: <https://doi.org/10.1111/j.1748-720X.2006.00029.x>. PMID: [16789945](https://pubmed.ncbi.nlm.nih.gov/16789945/)

Special Journal Issue Legal/Policy Analysis R01HG002836

Special Journal Issue Legal/Policy Analysis R01HG002836

Special Journal Issue Conceptual Analysis R01HG002836

Special Journal Issue Conceptual Analysis R01HG002836

Williams R, Johnson P. **Inclusiveness, Effectiveness and Intrusiveness: Issues in the Developing Uses of DNA Profiling in Support of Criminal Investigations.** The Journal of Law, Medicine & Ethics. 2006;34(2):234-247. doi: <https://doi.org/10.1111/j.1748-720X.2006.00030.x>. PMID: [16789946](https://pubmed.ncbi.nlm.nih.gov/16789946/)

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Special Journal Issue

Conceptual Analysis

R01HG002836

Special Journal Issue

Conceptual Analysis

R01HG002836

Special Journal Issue

Conceptual Analysis

R01HG002836

Special Journal Issue

Conceptual Analysis

R01HG002836

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Special Journal Issue

Conceptual Analysis

R01HG002836

Special Journal Issue

Conceptual Analysis
and Legal/Policy
Analysis

R01HG002836

Special Journal Issue

Conceptual Analysis
and Legal/Policy
Analysis

R01HG002836

Special Journal Issue

Conceptual Analysis
and Computational/
Statistical Analysis

R01HG002836

Special Journal Issue

Legal/Policy
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R01HG002836

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Special Journal Issue	Legal/Policy Analysis	R01HG002836
Special Journal Issue	Commentary	R01HG002836
Special Journal Issue	Commentary	R01HG002836
Special Journal Issue	Conceptual Analysis	R01HG002836

Terry SF, Terry PF. **A Consumer Perspective on Forensic DNA Banking.** The Journal of Law, Medicine & Ethics. 2006;34(2):408-414. doi: <https://doi.org/10.1111/j.1748-720X.2006.00047.x>. PMID: [16789963](https://pubmed.ncbi.nlm.nih.gov/16789963/)

Special Journal Issue

Commentary

R01HG002836

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DNA in Criminal Forensics: More Recent Influential Studies

Over the past twenty years, other ELSI scholars have built on these early foundational studies, addressing privacy and other issues arising from the use of genetic information in criminal forensics. Some scholars have also published important work on issues related to the risk of re-identification based on DNA data generated in the context of biomedical research or clinical medicine. To the extent of the risk that such information could fall into the hands of law enforcement investigators (or be used in other nonmedical contexts), these studies are also tangentially relevant and so have also been included here.

<i>Citation PMID Link</i>	<i>Article Type</i>	<i>Methodology</i>	<i>NIH Grant Number</i>
McGuire AL, Gibbs RA. No Longer De-Identified. Science. 2006;312(5772):370-1. doi: 10.1126/science.1125339. PMID: 16627725 .	Journal Article	Commentary	R01HG008918
Cole SA. How much justice can technology afford? The impact of DNA technology on equal criminal justice. Science and Public Policy. 2007;34(2):95-107. doi: 10.3152/030234207X190991.	Journal Article Conceptual	Legal/Policy Analysis	R03HG003302

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Altman RB, Clayton EW, Kohane IS, Malin BA, Roden DM. **Data re-identification: societal safeguards.** Science. 2013 Mar 1;339(6123):1032-3. doi: 10.1126/science.339.6123.1032-c. PMID: [23449577](#); PMCID: PMC3740512.

Journal Article	Survey	R01HG002836
Journal Article	Conceptual Analysis	R03HG003302
Book		R03HG003302
Book Chapter	Conceptual Analysis and Legal/Policy Analysis	R03HG003302
Journal Article	Commentary	R01HG006844

Kaufman D, Curnutte M, McGuire AL. **Clinical integration of next generation sequencing: a policy analysis.** J Law Med Ethics. 2014;42 Suppl 1(Suppl 1):5-8. doi: 10.1111/jlme.12158. PMID: [25298287](#).

Wagner JK, Yu J-H, Ifekwunigwe JO, Harrell TM, Bamshad MJ, Royal CD. **Anthropologists' views on race, ancestry, and genetics.** Am J Phys Anthropol. 2017;162(2):318-27. Epub 2016/11/22. doi: 10.1002/ajpa.23120. PMID: [27874171](#).

Guerrini CJ, McGuire AL, Majumder MA. **Myriad take two: Can genomic databases remain secret?** Science. 2017;356(6338):586-7. doi: 10.1126/science.aal3224. PMID: [28495717](#).

Raisaro JL, Tramèr F, Ji Z, Bu D, Zhao Y, Carey K, et al. **Addressing Beacon re-identification attacks: quantification and mitigation of privacy risks.** Journal of the American Medical Informatics Association. 2017;24(4):799-805. doi: 10.1093/jamia/ocw167. PMID: [28339683](#).

Nelson SC, Yu J-H, Wagner JK, Harrell TM, Royal CD, Bamshad MJ. **A content analysis of the views of genetics professionals on race, ancestry, and genetics.** AJOB Empirical Bioethics. 2018;9(4):222-34. doi: 10.1080/23294515.2018.1544177. PMID: [30608210](#)

Journal Article	Legal/Policy Analysis	R01HG006460
Journal Article	Survey	R00HG006446
Journal Article	Commentary	R01HG006460
Journal Article	Computational/ Statistical Analysis	R00HG008175
Journal Article	Survey	K99HG006446

DNA in Criminal Forensics: Investigative Genetic Genealogy

Over the past decade, with the explosion of interest in recreational DNA ancestry testing, a growing number of people have submitted DNA samples for analysis to companies such as Ancestry.com, 23andMe, Family Tree DNA, and My Heritage DNA, and to share and compare the DNA information that they learn with others, through services like GEDMatch. The rapid rise of participation in DNA ancestry testing has opened up a whole new set of possibilities for the investigation of criminal cases, as such data can sometimes provide leads to distant relatives of the person who participated in the service. This information can then be combined with data in traditional genealogical records to help investigators build out extended family trees. In this way they may eventually, in some cases, be able to “zero in” on the perpetrator of the crime.

The general ethical quandaries raised by familial searching or kinship inference were anticipated by ELSI researchers early on, well before the advent of the DNA ancestry testing industry. As these researchers recognized, this type of testing raises some unique ethical issues because of its potential to cast suspicion over entire extended families, based solely on their genetic relationship to someone who may have committed a crime.

The ELSI Program has funded some preliminary research that examines public attitudes about investigative genetic genealogy. The research to date suggests that the public is generally supportive of the practice, at least when it is used to help solve the most violent of crimes, crimes against children, or missing persons cases. However, it also shows that some people are disquieted by certain features of the practice (even though, as suggested by even more recent research, some of these concerns may be misplaced). Other recent ELSI research suggests that the way courts have addressed issues regarding privacy in this context may be misaligned with people’s actual privacy expectations.

The Program has also supported research on two important ancillary issues: surreptitious DNA collection and analysis (the use by law enforcement of DNA recovered from discarded materials) and DNA phenotyping (an emerging investigative technique that involves the use of DNA to make inferences about a perpetrator’s likely racial background or other physical characteristics). However, many complex issues in this area remain.

<i>Citation PMID Link</i>	<i>Article Type</i>	<i>Methodology</i>	<i>NIH Grant Number</i>
Bieber FR, Brenner CH, Lazer D. Finding Criminals Through DNA of Their Relatives. Science. 2006;312(5778):1315. doi: 10.1126/science.1122655. PMID: 16690817 .	Journal Article	Commentary	R01HG002836
Scherr A. Genetic Privacy and the Fourth Amendment: Unregulated Surreptitious DNA Harvesting. Georgia law review. 2013. https://www.georgialawreview.org/article/3343-genetic-privacy-the-fourth-amendment-unregulated-surreptitious-dna-harvesting	Journal Article	Legal/Policy Analysis	R03HG004036
Claes P, Liberton DK, Daniels K, Rosana KM, Quillen EE, Pearson LN, et al. Modeling 3D Facial Shape from DNA. PLOS Genetics. 2014;10(3):e1004224. doi: 10.1371/journal.pgen.1004224. PMID: 24651127 .	Journal Article	Computational/ Statistical Analysis	K99HG006446
Guerrini CJ, Robinson JO, Petersen D, McGuire AL. Should police have access to genetic genealogy databases? Capturing the Golden State Killer and other criminals using a controversial new forensic technique. PLoS Biol. 2018;16(10):e2006906-e. doi: 10.1371/journal.pbio.2006906. PMID: 30278047 .	Journal Article	Survey	K01HG009355 R01HG008918

Hazel JW, Clayton EW, Malin BA, Slobogin C. **Is it time for a universal genetic forensic database?** Science. 2018;362(6417):898. doi: 10.1126/science.aav5475. PMID: [30467160](#).

Martinez-Martin N, Insel TR, Dagum P, Greely HT, Cho MK. **Data mining for health: staking out the ethical territory of digital phenotyping.** npj Digital Medicine. 2018;1(1):68. doi: 10.1038/s41746-018-0075-8. PMID: [31211249](#).

Hazel JW, Clayton EW, Malin BA, Slobogin C. **Risks of compulsory genetic databases—Response.** Science. 2019;363(6430):940. doi: 10.1126/science.aaw8839

Erlich Y, McGuire A. Meeting Agenda. **Emerging Issues of Privacy, Trust, and Societal Benefit from Consumer Genomics**; October 19-22, 2019; The Banbury Center, Cold Spring Harbor Laboratory, New York, USA 2019. <https://www.cshl.edu/banbury/meeting-reports/>

Sero D, Zaidi A, Li J, White JD, Zarzar TBG, Marazita ML, et al. **Facial recognition from DNA using face-to-DNA classifiers.** Nature Communications. 2019;10(1):2557. doi: 10.1038/s41467-019-10617-y. PMID: [31186421](#).

Journal Article	Commentary	RM1HG009034
Journal Article	Conceptual Analysis	T32HG008953
Journal Article Response		RM1HG009034
Meeting Agenda		K01HG009355
Journal Article	Computational/ Statistical Analysis	R00HG006446

Madden D, Katsanis SH. **Letter to the Editor-Context-specific considerations for development of guidelines for the implementation of rapid DNA.** J Forensic Sci. 2020 Nov 4. doi: 10.1111/1556-4029.14617. Epub ahead of print. PMID: [33146904](#).

Katsanis SH. **Pedigrees and Perpetrators: Uses of DNA and Genealogy in Forensic Investigations.** Annu Rev Genomics Hum Genet. 2020 Aug 31;21:535-564. doi: 10.1146/annurev-genom-111819-084213. Epub 2020 Apr 14. PMID: [32289230](#).

Ruhl GL, Hazel JW, Clayton EW, Malin BA. **Public Attitudes Toward Direct to Consumer Genetic Testing.** AMIA Annu Symp Proc. 2020 Mar 4;2019:774-783. PMID: [32308873](#); PMCID: PMC7153088.

Slobogin C, Hazel JW. **'A World of Difference?': Law Enforcement, Genetic Data and the Fourth Amendment.** Duke Law Journal. 2020;70. [ABSTRACT](#).

Guerrini CJ, Wickenheiser RA, Bettinger B, McGuire AL, Fullerton SM. **Four misconceptions about investigative genetic genealogy.** J Law Biosci. 2021 Apr 13;8(1):lsab001. doi: 10.1093/jlb/lsab001. PMID: [33880184](#); PMCID: PMC8043143.

Letter to the Editor

Commentary

R01HG009923

Journal Article

Literature Review

R01HG009923

Journal Article

Literature Review
and Survey

RM1HG009034

Journal Article

Legal/Policy Analysis

RM1HG009034

Journal Article

Legal/Policy Analysis

R01HG011268

DNA in Immigration Proceedings

DNA testing has a long history of use in U.S. immigration law. For more than twenty years, the voluntary testing of DNA by immigration petitioners who lack adequate documentation to otherwise verify their identity or establish a claimed family relationship has been a well-established practice. In addition, for more than a decade, DNA testing, and the entry of the resulting data into the FBI's Combined DNA Index System (CODIS) database, has been required of individuals caught entering the country illegally and detained. More recently, DNA testing, and the entry of the data into CODIS, has also explicitly been required of refugees and asylum seekers, as well as of children from Central American countries seeking to join their parents in the U.S. Although the use of DNA in immigration can be helpful in verifying the relationships among family members, family relationships in many cultures are defined more in social than biological terms, raising questions about the appropriateness of this requirement. The requirement that DNA data from such persons be placed in government databases also raises privacy and related civil liberties issues.

A particularly challenging issue that can arise in the immigration context occurs when DNA test results unexpectedly reveal misattributed paternity or a previously undisclosed adoption. This is by no means a novel issue; some of the very earliest clinically-focused research supported by the ELSI Program grappled with the ethical dilemma medical geneticists and researchers can face when confronted with incidental findings of these types (or with findings of genetic relatedness between parents). The use of DNA in the immigration context raises a number of other interesting ethical, legal, and social issues, which ELSI researchers have begun to address.

<i>Citation PMID Link</i>	<i>Article Type</i>	<i>Methodology</i>	<i>NIH Grant Number</i>
Barata L. Genetic Testing in Immigration for Family Reunification: Ethical, Legal and Social Implications. 2013. Link	Dissertation	Interviews and Ethnography	F31HG005201
Barata LP, Starks H, Kelley M, Kuszler P, Burke W. What DNA can and cannot say: Perspectives of immigrant families about the use of genetic testing in immigration. <i>Stanford Law Pol Rev.</i> 2015;26:597-638. PMID: 26855553 .	Law & Policy Review	Interviews and Ethnography	F31HG005201

Wagner JK, Madden D, Oray V, Katsanis SH. **Conversations Surrounding the Use of DNA Tests in the Family Reunification of Migrants Separated at the United States-Mexico Border in 2018.** Front Genet. 2019;10:1232-. doi: 10.3389/fgene.2019.01232. PMID: [31921289](https://pubmed.ncbi.nlm.nih.gov/31921289/).

Journal Article

Conceptual
Analysis

R0HOG006446

Farahany N, Chodavadia S, Katsanis SH. **Ethical Guidelines for DNA Testing in Migrant Family Reunification.** The American Journal of Bioethics. 2019;19(2):4-7. doi: 10.1080/15265161.2018.1556514. PMID: [30784382](https://pubmed.ncbi.nlm.nih.gov/30784382/).

Journal Article

Commentary

R01HG009923

DNA in Missing and Unidentified Persons Cases

DNA testing is also being used to assist in the identification of missing and unidentified persons. This can occur in contexts ranging from murder cases and wartime casualties to natural disasters, other mass disasters, and large-scale human rights violations. In murder cases involving victims whose identity is unknown, DNA testing can be used to compare genetic material extracted from the remains to DNA known to have come from a missing person. Where no DNA from the missing person is available, comparison can be made to DNA from the person's close biological relatives.

Since 1993, the U.S. military has maintained the Armed Forces Repository of Specimen Samples for the Identification of Remains ([AFRSSIR](https://www.afrrssir.com/)), a biorepository that houses reference specimens from all active duty and reserve service members, as well as DNA from terrorists and others detained on the battlefield. The ELSI Program has supported some early research that specifically examines the ethical and policy issues raised by the military's repository.

DNA has also been used to identify the victims of natural disasters (for example, the 2004 Indian Ocean tsunami and the 2013 hurricane in the Philippines) and the victims of mass casualty incidents (for example, the 9/11 World Trade Center attacks and various plane crashes). It has also been used in the investigation of large-scale human rights abuses. For example, in the 1980s, DNA testing was used to identify children who had been stolen from their families and illegally adopted under the military dictatorship in Argentina's "Dirty War". More recently, DNA has been used in connection with the investigation of human rights abuses in Guatemala, South Africa, and the former Yugoslavia.

<i>Citation PMID Link</i>	<i>Article Type</i>	<i>Methodology</i>	<i>NIH Grant Number</i>
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Journal Article	Conceptual Analysis	R03G004655
Journal Article	Interviews	R01HG005702
Journal Article	Commentary	R01HG005702z
Journal Article	Conceptual Analysis	R03HG006730

DNA in the Investigation of Family Relationships

The use of genetic information to answer questions about biological relatedness between individuals, and not just to determine the identity of an individual, has been recognized since the 1920s, when ABO blood marker testing began to be used in paternity testing. DNA testing can also be used to establish (or disestablish) the existence of other family relationships. While the ethical, legal, and social implications of sharing information about biological relatedness (or unrelatedness) within families have long been a subject of ELSI research, the recent explosion of interest in recreational genetic genealogy has raised the complexity of these issues to a new level .

A particular application of direct-to-consumer DNA testing about which the ELSI Program has funded research is the growing use of such testing by adopted persons (or occasionally, birth parents) seeking to reunite or at least to uncover more information about those from whom their connection has been severed. Another way in which DNA relationship testing in the familial context can occur is when married men, claiming to have been defrauded into believing they were the father of a child, seek to “disestablish” their parental status to eliminate financial or other parental responsibilities. ELSI investigators have begun to address the ethical, legal, and social implications of these practices, which raise interesting questions about the very definition of “parenthood” and the way family relationships are or should be conceptualized.

The ELSI Program has also supported work examining questions such as the effect of DNA ancestry test information on conceptions of individual and group identity. For example, investigators have studied the extent to which the emergence of the DNA ancestry testing industry has reinforced folk ideas about race that conflate social with biological conceptions of identity versus the extent to which such testing can lead to a more nuanced conception of racial or ethnic categories.

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R01HG002313

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R01HG001362

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K99HG006446

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K99HG004316

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R01HG006295

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Journal Article	Survey	R21HG008041
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Journal Article	Computational/ Statistical Analysis	RM1HG009034
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