

IGGAB S001

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Investigative Genetic Genealogy – Professional Standards and Accreditation Requirements

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Investigative Genetic Genealogy Accreditation Board, Inc.

16192 Coastal Highway, Lewes, DE 19958

Email: info@iggab.org

Website: www.iggab.org

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Introduction to the April 2024 Version

As all standards evolve and change, updates are made. IGGAB is committed to updating these Standards on a regular basis. Following are the substantive changes made in this Version.

Section 6.1. IGG Standard of Proof. Deleted the following phrase in the second sentence: “and they need not prove relationships according to the Genealogical Proof Standard.”

Genealogical analysis is at the heart of IGG and represents the bulk of work in most cases. As such, IGGAB’s standards incorporate by reference the best practices described in *the Genealogy Standards - Second Edition Revised - Board of Certification for Genealogists’* (BCG) standards. While Accredited Investigative Genetic Genealogists (AIGGs)—like all genealogists—need not reference BCG’s Genealogy Standards, those standards codify the best practices of genealogists, including AIGGs. The context of IGG work means that Leads generated by AIGGs may not always contain citations for every source relied upon in a case, but AIGGs shall maintain thorough documentation of their work, whether that is through a research log or simply a repository where links to all sources are retained. Generally, AIGGs shall apply best genealogical practices in a manner that is relevant and appropriate to the specific context.

Section 3.2 Accredited Investigative Genetic Genealogist (AIGG) – updated definition.

Section 3.9 Investigating Agency – updated definition to include those that conduct IGG.

Section 6.2.7 Family Tree DNA – added “and other databases”, i.e., DNA Justice.

Foreword

The Investigative Genetic Genealogy Accreditation Board (“IGGAB” or the “Board”)¹ is an independent, non-profit organization formed to develop standards of practice and requirements for accreditation in the field of Investigative Genetic Genealogy (IGG). The Board is comprised of experts in the field of IGG. The responsibilities of the Board are to:

- a) Develop and promulgate standards for competency and ethical practice in the field of IGG.
- b) Administer an exam that tests IGG applicant’s knowledge and practice of IGG Core Competencies, best practices, and ethical standards, as promulgated by the Board.
- c) Accredite applicants who pass the exam and agree to abide by the standards set by the Board.
- d) Provide an oversight mechanism for Accredited Investigative Genetic Genealogists (“AIGGs”) to ensure continuing competency and ethical practice.
- e) Maintain a registry of AIGGs.

The procedures used to develop this document and those intended for its further maintenance are available from the Board.

This document was prepared by current and former members of the Investigative Genetic Genealogy Accreditation Board as follows:

| Board Member | Organization |
|---------------------|-----------------------------------|
| Bonnie Bossert | Consulting for Financial Services |
| David Gurney | Ramapo College |
| Andrew Hochreiter | Highrider Consulting |
| Michele Kennedy | Solved by DNA |
| CeCe Moore | Institute for Genetic Genealogy |
| Margaret Press | DNA Doe Project |
| Amanda Reno | AdvancedDNA |
| Carol Rolnick | Rolnick Research |

Input on this document was additionally provided by members of the IGGAB Advisory Board (the “Advisory Board”). All input was considered but not necessarily adopted by the Board. At the time of this document’s publication, the Advisory Board comprised the following members (see www.iggab.org website for current Advisory Board members and their affiliations).

¹ IGG is sometimes referred to as forensic investigative genetic genealogy and may be defined in terms of the process employed. The Board adopts IGG as the standard name for the field.

| Advisory Board Member | Organization |
|------------------------------|--|
| Blaine Bettinger | PhD, JD, The Genetic Genealogist |
| Cairenn Binder | Director, Ramapo College Investigative Genetic Genealogy Certificate Program |
| Trish Bird | Founder, Indigenetics Advisory Society |
| Ken Carriere | Detective, Calgary Police Service |
| Leigh Clark | Deputy Director, Florida Dept. of Law Enforcement |
| Janel Daniels | Miami Dade Police Detective (retired) |
| Catherine Desmarais | CG, CEO, Stone House Historical Research |
| Tracey Dowdeswell | PhD, LL.M, Adjunct Professor, Queen’s University |
| Ginny Georgantas Gleason | Detective, Cook County Illinois Sheriff’s Department |
| Christi Guerrini | JD, MPH, Baylor College of Medicine |
| Greg Hampikian | Director, Idaho Innocence Project |
| Danny Hellwig | Director, Intermountain Forensics |
| Eric Hendershott | Detective, Twinsburg Ohio Police Department |
| John Kellner | District Attorney, Colorado 18th Judicial District |
| Kevin Lord | CEO, Saber Investigations |
| CeCe Moore | Co-founder, Institute for Genetic Genealogy |
| Nancy Rissi | Coroner, Riverside County Sheriff Coroner’s Office |

These Standards apply to AIGGs. Although individuals from anywhere in the world may take the accreditation exam and receive accreditation, they are each responsible for complying with the laws of any of the jurisdictions in which they practice or reside.

1. Scope

The purpose of these Standards is to provide for competence and ethical practice in the field of Investigative Genetic Genealogy (“IGG”). These Standards address a variety of concerns including issues of data privacy, public and Investigating Agency trust, and practitioner competency, ethics, and accountability.

IGG is an emerging field. As such, the tools and methods of IGG are still developing. Most of these Standards address the *Investigative Genetic Genealogy Code of Professional Ethics* and Core Competencies that, per the Board’s determination, are basic to the field of IGG and thus shall not be significantly altered as the field develops. Yet, given ongoing developments in the field of IGG, it is contemplated that some of these Standards may be adapted in the future.

With these Standards and the accompanying accreditation requirements presented in this document and in the Normative References, jurisdictions that adopt regulations for IGG need not develop their own ad hoc standards. Instead, they may rely on the fact that any AIGG has demonstrated competence, adherence to ethical practice, and willingness to be held accountable. To the extent that jurisdictions adopt them, these Standards alleviate potential issues that might result from divergent standards for IGG being applied within and across different jurisdictions.

2. Normative References

The following documents are referred to in the text in such a way that some or all their content constitutes the requirements of this document. For date references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

Investigative Genetic Genealogy Best Practices, IGGAB.

Investigative Genetic Genealogy Code of Professional Ethics, IGGAB.

Investigative Genetic Genealogy Exam Preparation Guide, IGGAB.

Investigative Genetic Genealogy Accreditation Board Standard Operating Procedures, IGGAB.

3. Terms and Definitions

For the purposes of this document, the following terms and definitions apply and are capitalized when used.

3.1

Accessible Genetic Genealogy Database

a public or private genetic genealogy database where users upload their Genetic Data File and are given the explicit privacy option (opt-in/out) to have that data compared against the relevant DNA profiles for the purposes of Investigative Genetic Genealogy.

3.2 Accredited Investigative Genetic Genealogist (AIGG)

an individual who works in the field of IGG who has demonstrated competency in the practical skills and ethical considerations involved in IGG work by passing the exam administered by IGGAB and has agreed to conform to the established *Investigative Genetic Genealogy Professional Standards and Accreditation Requirements and Code of Professional Ethics*.

3.3 Candidate

The name of an individual who is hypothesized to be the Subject.

3.4 Common Ancestor

the most recent individual of any set of individuals from which all the people in the group are directly descended.

3.5 Core Competency

a defined level of proficiency and demonstrated knowledge and skill in Investigative Genetic Genealogy as described in the *Investigative Genetic Genealogy Exam Preparation Guide*.

3.6 DNA Relative

an individual who is a potential genetic relative of the Subject by sharing some identical segments of their Genetic Data File in the Accessible Genetic Genealogy databases, colloquially referred to as a “match”.

3.7 Genetic Data File

any digital data obtained from processing DNA results derived from either a forensic or a Direct to Consumer (DTC)s DNA sample.

3.8 Informed Consent

an individual or their legal proxy’s written voluntary permission given with the understanding of the possible consequences and full knowledge of the possible risks and benefits of sharing their Genetic Data File.

3.9

Investigating Agency

any agency that uses the services of an AIGG or conducts IGG e.g., law enforcement, district attorney's offices, forensic laboratories, medical examiners, and coroners.

3.10

Investigative Genetic Genealogy (IGG)

an investigative method that uses genetic and documentary genealogical research to establish relationships between individuals, leading to a hypothesis about a Subject's identity. IGG work begins when the Subject's DNA test results are available in the Accessible Genetic Genealogy database(s) and concludes with providing a Lead or Leads.

3.11

IGG Standard of Proof

The criterion by which the work of an AIGG is evaluated.

3.12

Lead(s)

a hypothesis with a reasonable likelihood of accuracy that guides the Investigating Agency to one or more Candidates that is discovered using Investigative Genetic Genealogy.

3.13

Qualifying Crime

An offense as defined by the DOJ Interim Policy (see Annex A) or an Accessible Genetic Genealogy Databases.

3.14

Reference Test Taker

an individual whose shared amount of DNA with the Subject is unknown and:

- a) who provides Informed Consent to submit their Genetic Data File to one or more Accessible Genetic Genealogy Databases for the purpose of assisting with an IGG case or,
- b) whose Genetic Data File is created from collected DNA and compared directly to the Subject for the purpose of assisting with an IGG case.

3.15

Subject

an individual:

- a) whose biological material is found in a probative location connected to the scene of a Qualifying Crime, or
- b) who is deceased and whose identity is unknown.

4. Accreditation Requirements for Applicants

To earn and maintain the AIGG credential, applicants shall meet the following criteria:

- a) satisfy the accrediting requirements administered by IGGAB as described in the *Investigative Genetic Genealogy Exam Preparation Guide*.
- b) agree to abide by these Standards and the *Investigative Genetic Genealogy Code of Professional Ethics*.
- c) consent to ongoing oversight by IGGAB as described in Section 7.
- d) be reaccredited to demonstrate continuing proficiency in a manner and interval defined by the Board as described in the *Investigative Genetic Genealogy Exam Preparation Guide*.

5. The Accreditation Exam

The accreditation exam administered by IGGAB shall test applicants' knowledge and practice of the Core Competencies, specific IGG skills, knowledge of IGGAB Standards, ethical practice, and report writing skills as described in Section 6. The *Investigative Genetic Genealogy Exam Preparation Guide* provides detailed requirements for the accreditation exam.

An applicant shall not be required to complete any program of education before taking the accreditation exam. An applicant shall submit a summary of their education and experience related to IGG when applying for the exam.

An AIGG shall be required to be periodically reaccredited as described in the *Investigative Genetic Genealogy Exam Preparation Guide*.

5.1. Accredited Investigative Genetic Genealogy Registry

The AIGG Registry is a list of those individuals who have passed the Accreditation Exam and maintained their accreditation as described in the *IGGAB Exam Preparation Guide*. An AIGG who completes the accreditation exam and obtains their AIGG credential shall be added to the AIGG Registry and shall be entitled to use the honorific "AIGG" or "Accredited Investigative Genetic Genealogist."

6. IGGAB Professional Standards

An AIGG shall adhere to the standards in this Section.

6.1. The IGG Standard of Proof

An AIGG shall generate Leads that may suggest the identity of the Subject. They do not provide evidence that is conclusive proof of the identity of the Subject. IGGAB's standards incorporate by reference the best practices described in *the Genealogy Standards - Second Edition Revised - Board of Certification for Genealogists' (BCG)* standards.^{2,3} The work of an AIGG shall be measured by the IGG Standard of Proof.

The IGG Standard of Proof shall be achieved when the AIGG produces one or more Leads such that further investigation is justified. The IGG Standard of Proof shall ensure that an AIGG does not waste an Investigating Agency's resources nor subject individuals to undue suspicion or scrutiny.

The IGG Standard of Proof includes the elements in Sections 6.1.1 through 6.1.3.

6.1.1. DNA and DNA Relative Analysis

The potential Candidate(s) shall be analyzed using analytical tools, statistical data, and reasoning to form a hypothesis of the relationship, if any, between the Subject's DNA and each DNA Relative utilized.

An AIGG may access the DNA Relative information within Direct to Consumer (DTC) databases of an individual if the individual has granted access in accordance with the DTC database's terms of service, without violating those terms.

6.1.2. Investigative Analysis

The potential Candidate(s) shall be analyzed using contextual clues and other data provided by the Investigating Agency.

AIGGs shall ensure the accuracy and reliability of all genetic and genealogical conclusions, including verifying any findings and citations generated by artificial intelligence (AI).

6.1.3. Genealogical Analysis

The probable relationship between the potential Candidate(s) and the DNA Relatives utilized —and all

²See Annex A.

³ While Accredited Investigative Genetic Genealogists (AIGGs)—like all genealogists—need not reference BCG's Genealogy Standards, those standards codify the best practices of genealogists, including AIGGs. The context of IGG work means that Leads generated by AIGGs may not always contain citations for every source relied upon in a case, but AIGGs shall maintain thorough documentation of their work, whether that is through a research log or simply a repository where links to all sources are retained. Generally, AIGGs shall apply best genealogical practices in a manner that is relevant and appropriate to the specific context.

the relationships for individuals between the Subject and the DNA Relative —shall have been established with documentary records sufficient to demonstrate that the relationship is likely or through documented analytic reasoning.

6.2 Competency Standards

An AIGG shall demonstrate proficiency by effectively applying the knowledge and skills specified in the Core Competencies listed below:

6.2.1 Investigative Genetic Genealogy Fundamentals

Knowledge of the fundamentals of Investigative Genetic Genealogy to include terminology, objectives, processes, and outcomes. Understand the most common misconceptions about the field.

6.2.2 DNA Evidence Basics

Understand the basics of crime scene evidence collection, DNA typing, and CODIS, and the implications of these concepts in IGG applications.

6.2.3 Genetic Genealogy Basics

Understand genetic inheritance, recombination, biogeographic ancestry, and DNA Relative matching.

6.2.4 DNA processing for IGG and Bioinformatics

Demonstrate general knowledge of the different types of DNA processing in IGG, lab considerations, and SNP file basics. Understand the basics of bioinformatics and imputation, and how DNA contamination and degradation affect the outcomes of DNA processing.

6.2.5 Ethical standards and Privacy

Demonstrate ethical practices in the field of IGG. Knowledge of IGGAB standards regarding qualifying crimes, Accessible Genetic Genealogy Database terms of service, confidentiality, and privacy.

6.2.6 GEDmatch Pro and GEDmatch

Demonstrate the ability to use GEDmatch Pro and GEDmatch and their associated tools. Prove knowledge of upload restrictions, terms of service, and database access for unidentified human remains and violent crimes.

6.2.7 FamilyTreeDNA and other Databases

Demonstrate the ability to use FamilyTreeDNA (Gene by Gene) and associated tools. Prove knowledge of upload restrictions and terms of service.

6.2.8 Identifying DNA Relatives

Demonstrate the ability to identify DNA Relatives from both GEDmatch and FamilyTreeDNA using limited information provided by the users of those databases.

6.2.9 Genealogical Research and Building Family Trees

Conduct genealogical research and construct family trees for DNA Relatives using genealogical resources. Demonstrate the ability to effectively evaluate genealogical evidence.

6.2.10 Identifying Common Ancestors and Union Couples

Identify Common Ancestors for a Subject using a variety of techniques such as clustering and grouping shared DNA Relatives. Understanding how to identify Union Couples and use them to narrow the search for the Subject.

6.2.11 Familial Relationships and Probabilities

Understand familial relationships used in genetic genealogy such as maternal and paternal, pedigree, and cousin degrees. Demonstrate the ability to analyze the Genetic Data File by applying documented statistical and experiential shared DNA probabilities to hypothesize familial relationships.

6.2.12 Descendancy Research

Demonstrate the ability to conduct genealogical research of descendants, bringing trees forward in time. Understand how to identify both deceased and living people using various resources, and how to prioritize family lines for research.

6.2.13 Genetic Genealogy Tools

Knowledge of genetic genealogy tools for relationship predictions, tree gathering, clustering, and charting.

6.2.14 Developing Hypotheses and Recommendations

Develop hypotheses based on the totality of the genetic genealogy research, identify potential Candidates, when possible, identify potential Reference Test Takers, or recommendations to further the investigation. These hypotheses should be developed by applying the IGG Standard of Proof.

6.2.15 Case Communication and Communication of Findings

Communicate coherent explanations of the process used to produce a Lead or Reference Test Takers, make recommendations, and provide updates. Communicate only within the bounds that have been set by the Investigating Agency or court.

6.3. Ethical Standards

An AIGG shall adhere to the *Investigative Genetic Genealogy Code of Professional Ethics* that addresses:

- a) confidentiality, data security, and Informed Consent,
- b) transparency and accountability,
- c) professionalism, compliance, and continuing education.

6.3.1 Compliance with Local Laws

An AIGG shall abide by the law and comply with all applicable legislation, including laws governing privacy, data collection, and use of computer technologies.

7. Dispute Resolution

If a violation of the Standards set forth in this document or in the *IGGAB Code of Professional Ethics* occurs, the Board shall oversee a review process for disciplinary actions conducted by a sub-committee of the IGGAB organization whose membership is to be determined. The review process could result in remedial education, supervision, and/or suspension or revocation of an AIGG's accreditation. The final action will be determined by the sub-committee. Appeal and reinstatement requirements shall be determined by the sub-committee.

To facilitate monitoring, an AIGG shall:

- a) self-report any breaches of these standards that they have committed,
- b) report any breaches of these standards that, to the best of their knowledge, another AIGG has committed,
- c) respond promptly to all communications with the Board, and,
- d) as permitted, promptly provide all materials that are requested of them by the Board.

Violating the Standards set forth in this document or in the *IGGAB Code of Professional Ethics* could result in professional sanctions and is subject to being reported to the affected or involved parties.

8. Annex A Bibliography (Informative)

This is not meant to be an all-inclusive list as IGGAB recognizes other publications on this topic may exist. At the time these Standards were drafted, these were the publications used for reference.

- 1) American National Standards Institute (ANSI) *ANSI Essential Requirements: Due process requirements for American National Standards*, March 2, 2002.
- 2) Bettinger, Blaine. *The Family Tree Guide to DNA Testing and Genetic Genealogy*, 2nd ed. Place: Publisher, 2019.
- 3) Board for Certification of Genealogists (BCG), *Genealogy Standards*, 2nd ed. rev. Washington, DC: BCG, 2021.
- 4) [DNA Justice Terms of Service](#) DNA Justice Foundation – Terms of Service.
- 5) [FTDNA Terms of Service](#) FamilyTreeDNA (d/b/a for Gene by Gene, Ltd) terms of service, including links to all of the FTDNA policies. Last updated January 17, 2022.
- 6) [GEDmatch Terms of Service](#) GEDmatch (operated by Verogen) terms of service and privacy policies. Last updated December 30, 2021
- 7) *ISO/IEC 17020:2012 Conformity assessment — Requirements for the operation of various types of bodies performing inspection 17025*
- 8) *ISO/IEC 17024:2012 Conformity assessment — General requirements for bodies operating certification of persons*
- 9) *ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories*
- 10) National Technology Validation and Implementation Collaborative (NTVIC): *Guidelines for Establishing Forensic Investigative Genetic Genealogy (FIGG) programs*. Forensic Science International: Synergy, 10 November 2023.
- 11) United States Department of Justice, *Interim Policy Forensic Genetic Genealogical DNA Analysis and Searching*, 2019.