Forensic Genetic Genealogy

609.1 PURPOSE AND SCOPE

This policy provides guidance for the use of forensic genetic genealogy (FGG) to generate investigative leads.

609.1.1 DEFINITIONS

Definitions related to this policy include:

Combined DNA Index System (CODIS) - An FBI computer software program that operates deoxyribonucleic acid (DNA) profile databases for law enforcement use.

DNA typing laboratory - A laboratory that analyzes biological samples, including extracted DNA, in order to provide various DNA profile types. State or local crime labs are generally not equipped to provide single nucleotide polymorphism (SNP) DNA profiles; therefore, the use of private DNA typing laboratories is often necessary for FGG.

Extracted DNA - The DNA isolated from a biological sample remaining after previous DNA testing has been completed.

Forensic genetic genealogy (FGG) - The process of obtaining a SNP DNA profile from a biological sample collected during an investigation; uploading the profile to a genetic genealogy site for comparison to the consumer profiles in the site's database to identify genetic relatives; and using the identified genetic relationships, as well as traditional genealogy research, to generate investigative leads.

Genetic genealogist - A genealogist who uses DNA testing with traditional genealogical research methods to assist law enforcement or private clients in identifying biological relatives of an individual.

Genetic genealogy site - A database of DNA profiles voluntarily submitted by public consumers for the purpose of identifying genetic relatives. The availability of genetic genealogy sites for law enforcement use varies depending on their terms of service.

Short tandem repeat (STR) DNA profile - The results of DNA typing in a format that can be processed through CODIS and state DNA databases. This is the type of DNA used in conventional non-FGG law enforcement investigations.

Single nucleotide polymorphism (SNP) DNA profile - The results of DNA typing in a format that enables an unknown DNA sample to be compared to the DNA profiles maintained by a genetic genealogy site. This is the DNA type used in FGG.

609.2 POLICY

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The Louisville Police Department's use of FGG will be in coordination with prosecutors, the Coroner, and other appropriate resources only in qualifying cases after reasonable conventional investigative methods have been pursued. Members will take reasonable steps to maintain the integrity of the FGG process and safeguard the privacy rights of individuals whose DNA profiles are analyzed.

609.3 CRITERIA FOR FGG USE

Before using FGG, the lead investigator should coordinate with the supervisor to determine whether the case meets the following requirements:

a. Biological evidence collected as part of the underlying investigation (or extracted DNA from the biological evidence) is available for additional testing and is reasonably believed to be attributable to:
    1. The perpetrator of an unsolved violent felony.
    2. The unidentified human remains of a suspected homicide victim.
b. All reasonable conventional investigative methods have been utilized and all reasonable investigative leads have been pursued (e.g., relevant case information entered in the National Missing and Unidentified Persons System (NamUs) and the Violent Criminal Apprehension Program (ViCAP) national database).
c. An STR DNA profile has been developed from the biological evidence collected in the case and, absent unusual circumstances, has been uploaded to CODIS and any applicable state DNA database for comparison with negative results.

609.4 COORDINATION

Once a preliminary determination has been made that a case may qualify for the use of FGG, the lead investigating member should consult with the appropriate prosecutor to address current and prospective legal issues and determine if a search warrant is required.

In the case of unidentified human remains, the lead investigator should also consult with the Coroner.

609.5 SUBMISSION OF SAMPLE

The biological evidence or extracted DNA should be submitted to a DNA typing laboratory approved by the Department in order to obtain a SNP DNA profile.

Once a SNP DNA profile has been obtained from the biological evidence or extracted DNA, the lead investigating member should arrange for it to be compared to the SNP DNA profiles contained in one or more genetic genealogy sites to identify possible genetic relatives. The lead investigator should work with a qualified genetic genealogist as needed during this process.

When submitting a SNP DNA profile for comparison, the lead investigator or the authorized designee (e. g., assigned genetic genealogist) shall notify the genetic genealogy site that the request for comparison is

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from a law enforcement agency and confirm that the site's terms of service permit FGG for the type of case being investigated. The use of the SNP DNA profile and any subsequent comparison shall be limited to the original underlying investigation.

If at any time during the FGG process the case no longer meets the criteria for FGG use, the lead investigator should promptly notify the DNA typing laboratory, genetic genealogy site, and/or genetic genealogist to cease any further analysis and to return all evidence, data, and materials to the Department.

609.6 ANALYSIS OF FGG DATA

Once results of a comparison are received from a genetic genealogy site, the information should be evaluated by a genetic genealogist, who will assist the lead investigator in identifying potential investigative leads.

The lead investigator should promptly and diligently pursue each viable lead identified through the FGG process using traditional investigative methods, as appropriate, to:

a. Eliminate an individual as a potential suspect in the case.
b. Link an individual to the case as a potential suspect.
c. Identify human remains.

609.7 COLLECTION OF THIRD-PARTY DNA SAMPLE

If it is determined that a third-party DNA sample (i.e., from a person not likely to be a suspect in the investigation) should be collected and analyzed for FGG, consent from the third party should be obtained prior to collection.

If there is a reasonable belief that the integrity of the investigation would be compromised by seeking consent from the third party prior to collection, the lead investigator should consult with the prosecutor regarding applicable laws and procedures in both the jurisdiction of the investigation and the jurisdiction where the collection will occur, if different.

The use of a third-party DNA sample shall be limited to the original underlying investigation.

609.8 POST-IDENTIFICATION

Members shall not rely solely on FGG identification of a potential suspect for probable cause to make an arrest or obtain an arrest warrant. Unless there is sufficient evidence independent of the FGG data to support an arrest, a potential suspect identified through FGG should not be arrested until the suspect's identity is confirmed.

Members shall not rely solely on FGG to identify human remains unless there is sufficient evidence independent of the FGG data to declare the identification or confirmation testing has been completed.

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Confirmatory DNA testing should be conducted by collecting a known DNA sample from the potential suspect or, in the case of unidentified human remains, from a close biological relative. This known DNA sample should be submitted for comparison to the original unknown STR DNA profile through conventional methods (e.g., in CODIS).

The lead investigator should consult with the prosecutor to determine the appropriate method of obtaining a known DNA sample.

Once the identity of a suspect or the identity of unidentified human remains has been confirmed through conventional DNA testing, the lead investigator should:

a. Consult with the prosecutor to evaluate the entire investigative file for consideration of criminal charges or further investigation.
b. If applicable, consult with the Coroner for an amendment to a certificate of death.

609.9 PRIVACY CONSIDERATIONS

Members should make reasonable efforts to respect and protect the privacy of non-suspect genetic relatives identified through the FGG process. The names and identifying information of any non-suspect genetic relatives should not be included in official reports, probable cause declarations, or affidavits for search warrants and should not be disclosed unless otherwise required by law or court order.

The lead investigator should formally request that the SNP DNA profile be removed from all genetic genealogy sites upon identity confirmation and should retain a copy of the request for department records. The lead investigator should request that all case-related records and data provided to, or generated by, a genetic genealogist during the FGG process be returned to the Department.

609.10 RETENTION OF DNA SAMPLES AND RELATED RECORDS

Genetic information, including any derivative profiles and genetic genealogy site user information, should be retained in accordance with the established records retention schedule. The lead investigator should coordinate with the property and evidence technician and provide adequate notice to the appropriate prosecutor's office before destroying any profiles or data obtained from the FGG process.

See the Property and Evidence Policy for guidelines regarding biological evidence, including DNA samples.

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