

BJA FY26 Emmett Till Program Forensic Appendix

Definitions

For the purposes of the BJA FY26 Emmett Till Program NOFO, the following are defined:

Combined DNA Index System (CODIS): The generic term used to describe the Federal Bureau of Investigation's program of support for criminal justice DNA databases, as well as the software used to run these databases. CODIS contains profiles from forensic evidence and Offenders/Arrestees and can provide investigative information that may assist with identifications. There are three levels of CODIS: the Local DNA Index System (LDIS), used by individual laboratories; the State DNA Index System (SDIS), used at the state level to serve as a state's DNA database containing DNA profiles from LDIS laboratories; and the National DNA Index System (NDIS), managed by the FBI as the nation's DNA database containing all DNA profiles uploaded by participating states.

Digital Evidence Analysis: The data retrieval and analysis of multimedia audio, video, and still image materials, such as surveillance recordings and video enhancement and computers associated with criminal casework.

DNA Analysis: Includes the handling, screening, DNA collection, laboratory testing, profile interpretation, and reporting of samples containing DNA. DNA analysis may be conducted on crime scene evidence or known reference samples.

DNA profile from a suspect: A CODIS-eligible (or otherwise statistically relevant) DNA profile that has been generated from crime scene evidence and is attributed to the suspected perpetrator of the violent cold case crime.

Familial DNA searching: An intentional or deliberate search of the DNA database conducted after a routine search for the purpose of potentially identifying close biological relatives of the unknown forensic sample associated with crime scene evidence.

Firearms & Toolmark Analysis: The examination and interpretation of firearm and toolmark evidence. This includes the comparison of microscopic toolmarks on bullets, cartridge cases, and other ammunition components and may also include firearm function testing, serial number restoration, muzzle-to-object distance determination, tools, and toolmarks.

Forensic genetic genealogy (FGG): The combination of genetic analysis using single nucleotide polymorphism (SNP) testing with traditional historical and genealogical research to study family history. For forensic investigations, it can be used to connect unidentified DNA from forensic evidence or unidentified human remains to potential relatives in genealogical databases. This information can help point to the possible identity of the perpetrator or unidentified remains.

Friction Ridge Analysis: The interpretation of friction ridge patterns (e.g., from fingers, palms, and feet) developed from crime scene evidence.

Mitochondrial DNA Analysis (mtDNA): A forensic DNA technology that targets DNA found within the mitochondria of a cell. It is particularly useful in instances with limited sample or where the DNA is highly degraded such as hairs or evidence exposed to adverse conditions. Individuals (both male and female) along the same maternal line are expected to have the same mtDNA profile.

National DNA Index System (NDIS): One part of CODIS, that contains the DNA profiles contributed by federal, state, and local participating forensic laboratories. All 50 states, the District of Columbia, the federal government, the U.S. Army Criminal Investigation Laboratory, and Puerto Rico participate in NDIS.

National Integrated Ballistic Information Network (NIBIN): An automated ballistic imaging network established by the Bureau of Alcohol, Tobacco, Firearms, and Explosives and used by local, state, tribal and federal law enforcement partners. NIBIN compares images of submitted ballistic evidence from shooting scenes and recovered firearms and results in potential links or associations from the same firearm requiring further confirmation.

Next Generation Identification (NGI): A biometric database managed and operated by the FBI that stores and provides services related to individual fingerprint records, latent and palm prints, iris scan, facial recognition, and other biometric data for criminal justice purposes.

Probabilistic Genotyping Software (PGS): A computing tool to aid the interpretation of DNA results that uses statistical genetics, biological models, computer algorithms, and probability distributions to infer genotypes and calculate likelihood ratios to estimate evidentiary weight.

Prosecution: A proceeding instituted and carried out by due course of law, before a competent tribunal, for the purpose of determining the guilt or innocence of a person charged with a crime. For this NOFO, the term may also encompass all activities necessary to adjudicate violent cold case crimes, including, but not limited to, prosecutorial case review, investigation, crime analysis, and/or evidence analysis.

Short Tandem Repeat (STR) Analysis: The most common type of forensic DNA technology used in criminal casework and for searching in CODIS. It can be used to help connect suspects to crime scene evidence.

Trace Evidence Analysis: The examination and interpretation of physical evidence recovered from crime scenes that may result from the transfer of small or minute quantities of materials (e.g., hairs, fibers, paint, tape, glass, geological materials).

Violent Criminal Apprehension Program (ViCAP): A unit of the FBI responsible for the analysis of serial violent and sexual crimes, is situated within the Critical Incident Response Group's (CIRG) National Center for the Analysis of Violent Crime (NCAVC). ViCAP maintains the largest investigative repository of major violent crime cases in the United States. It is designated to collect and analyze information about homicides, sexual assaults, missing persons with circumstances of foul play, and unidentified remains where the manner of death is known or suspected to be homicide.

Y-STR Analysis: A forensic DNA technology that targets DNA locations on the Y chromosome that is only carried by male individuals. Males along the same paternal line are expected to have the same Y-STR DNA profile.

Program Specific Information

Requirements for Case Eligibility and Inventory

- Eligible Cases under the Emmett Till Program are unsolved civil-rights crimes resulting in death on/before Dec 31, 1979.
- Eligible cases must contain potentially testable evidence; a pre-existing suspect DNA profile is NOT required.

Requirements for DNA Analysis and Related Forensic Activities

- To qualify for the DNA analysis and related activities the case must meet Emmett Till eligibility requirements and be included as part of the awardee's approved inventory. Eligible Cases under the Emmett Till Program are unsolved civil-rights crimes resulting in death on/before Dec 31, 1979.
- All DNA analysis (except for FGG testing) performed using grant program funding must be done by a laboratory accredited to the FBI's Quality Assurance Standards (QAS). See Quality Assurance Standards for Forensic DNA Testing Laboratories.
- All eligible DNA profiles developed with funding under this program must be entered into CODIS and, where applicable, uploaded to NDIS.
- All DNA analyses conducted, and profiles generated during the testing portion of this program must be maintained pursuant to all applicable federal privacy requirements, including those described in 34 U.S.C. § 12592(b)(3).

- Once a case meets the initial eligibility requirements of this grant program, generally, the following DNA analysis activities are supported under the conditions included herein:
- STR, Y-STR, and mtDNA testing additional evidence: This may include clothing, objects, weapons, ligatures and other forensic evidence associated with the investigation when needed to further prepare the case for prosecution. It may also include re-testing of previously tested items with the most up-to-date versions of DNA typing and interpretation technologies to include interpretation using probabilistic genotyping software.
- Testing of reference samples: This may include known samples such as blood cards or buccal swabs from individuals associated with investigations.
- Specialized DNA collection or extraction techniques: Awardees should review cases and reach a consensus on next investigative steps as a multidisciplinary team (e.g., law enforcement, prosecutor, forensic scientist) before applying specialized DNA collection or extraction techniques in each case. Awardees are expected to discuss with their MDT the risks associated with these specialized methods such as evidence consumption, preservation, and integrity or chain of custody concerns prior to employing them in each case. If evidence is consumed, awardees are highly encouraged to choose methods with improved success rates based on published research findings.
- Familial DNA searches: If legally allowed in the awardee's state, it is highly recommended that familial DNA searching be performed first to try to identify an unknown suspect before pursuing FGG.
- Forensic Genetic Genealogy: Award recipients utilizing grant program funds for FGG must adhere to the DOJ Interim Policy Forensic Genealogical DNA Analysis and Searching (FGGS) ("Interim Policy on FGGS") document. If an award is made, prior to receiving award funds, the recipient must submit an express certification regarding the requirements associated with the use of Emmett Till Program funds for FGG. The certification must be submitted on the BJA-provided template: Certification as to the Use of FGG. Submission of this certification is not required at the time of application but is strongly encouraged. If an award is made, access to award funds will be withheld until this certification is received and approved by BJA.
- In the interest of fiscal responsibility, BJA highly recommends the awardee establish a relationship with the FBI's Investigative Genetic Genealogy (IGG) team for the investigative portion of FGG (at no cost to the awardee). Funding from this program may be used for the SNP testing portion of FGG. If the applicant proposes to outsource the genealogy portion of FGG (i.e., tree building and subsequent steps in the process) they should provide additional justification

in the project narrative and budget proposal section as to why in-house genealogy or the FBI IGG team is unlikely to meet their jurisdictional needs.

- Award recipients will be required to collect and report metrics related to FGG activities. See Interim Policy on FGGS and Performance Reports.
- Related Forensic Activities: All non-DNA forensic analysis (e.g., friction ridge analysis, digital evidence analysis, trace evidence analysis, etc.) should be performed by a facility that complies with generally accepted practices for the discipline, such as applicable accreditation and quality assurance standards. Non-DNA forensic analysis may be performed when material to an Emmett Till Program eligible case, even without suspect DNA. The results of the non-DNA analysis should be uploaded to the appropriate forensic databases as applicable (e.g., NIBIN, NGI).

ViCAP Requirements

- Award recipients must enter all “criteria cases” into ViCAP before the end of the grant period. If conducting FGG, ViCAP entry is required as part of exhausting reasonable leads.
- Cases submitted into the ViCAP database must meet ViCAP criteria requirements. ViCAP cases include:
 - Homicides (and attempts) that are known or suspected to be part of a series and/or are apparently random, motiveless, or sexually motivated.
 - Sexual assaults that are known or suspected to be part of a series and/or are committed by a stranger.
 - Missing persons where the circumstances indicate a strong possibility of foul play and the victim is still missing.
 - Unidentified human remains where the manner of death is known or suspected to be homicide.
- Award recipients must ensure all the ViCAP questions are appropriately answered and, when available, provide additional detail. Information in ViCAP must be comprehensive. The narrative section should be detailed but succinct. Narrative information can be copied and pasted directly from an agency’s incident report.
- Award recipients should enter all solved and unsolved ViCAP criteria cases, because a solved case could very well link to another agency’s unsolved case.
- Award recipients must leverage existing federal resources such as ViCAP by using the available services to generate investigative leads, when applicable. BJA has partnered with the FBI and its ViCAP team to support violent crime grant programs. FBI ViCAP staff are available to assist award recipients by providing training on optimal use of the database and by conducting crime analysis on

specific cases upon request. For more information about ViCAP, please refer to:
<https://www2.fbi.gov/hq/isd/cirg/ncavc.htm#vicap>.