



**State
Police**

**Forensic
Investigation
Center**

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Investigative Genetic Genealogy

What is Investigative Genetic Genealogy (IGG)?

- A recent technique that may generate new investigative leads in unsolved cases (such as the Golden State Killer case)
- Is used to build genealogical family trees which may develop potential suspects through a comparison search between crime scene DNA and consumer genealogy databases
- Is **NOT** available at the New York State Police (NYSP) Crime Lab, however vendors approved by the New York State Department of Health are capable of developing the DNA profiles required to conduct genealogical searches
- Genealogical searches are **NOT** funded by NYSP, therefore any costs incurred must be borne by the investigating and/or prosecutorial agencies

What types of cases are considered for IGG?

- Unsolved homicides, sexual assaults, aggravated assault, and unidentified human remains with a complete DNA profile are good candidates for IGG consideration

What kinds of samples are suitable for IGG?

- Semen and blood are excellent sources of DNA
- Saliva, tissue, teeth, and bone may also be used

How much DNA is necessary for IGG?

- The amount of DNA required to generate a DNA profile is dependent on the sample type, quality, and degradation

Can mixed DNA profiles (i.e.: DNA mixtures) be processed with IGG?

- While single source samples are preferred, certain mixtures may also be examined

How does IGG compare to Familial Searching (FS)?

- Both IGG and FS use known patterns of similarities between the DNA of related individuals and database searches as a tool to generate investigative leads.
- FS searches the STR (Short Tandem Repeat) DNA profiles uploaded by forensic labs into CODIS (Combined DNA Index System) to identify potential relatives of an unknown perpetrator.

- IGG requires a different type of DNA profile, based upon SNPs (Single Nucleotide Polymorphisms), which is used in genealogical research as the SNP profile is entered into Direct-to-Consumer genealogy databases to search for potential relatives.

Other processes to consider:

- The NYSP Crime Lab conducts *Familial Searching (FS)*
 - Link for information on FS:
<https://troopers.ny.gov/familial-search-fact-sheet>
 - Link for information on the FS application process:
<https://www.criminaljustice.ny.gov/forensic/familialsearch.htm>
- The NYSP Crime Lab conducts *cold case review*
 - Link for information on cold case review:
<https://troopers.ny.gov/crime-laboratory-system-sections>
 - Link for Biological Sciences section cold casework request form:
<https://troopers.ny.gov/cold-casework-request-lab-39>

For IGG inquiries related to case suitability, sample requirements, case review, or questions about this fact sheet, please contact one of the following NYSP Crime Laboratory staff:

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