

FORENSIC BIOLOGY ADMINISTRATIVE MANUAL

Investigative Genetic Genealogy Testing		
Status: Published		Document ID: 53563
DATE EFFECTIVE 03/21/2024	APPROVED BY Deputy Director	PAGE 1 OF 5

Forensic Investigative Genetic Genealogy Testing and Familial Searching

1 Overview

- 1.1 Forensic Investigative genetic genealogy (FIGG), sometimes also known as investigative genetic genealogy (IGG), is the science of using genetic and genealogical methods to generate leads for law enforcement entities investigating crimes and identifying human remains. Genetic genealogy uses DNA profiles from a crime scene or from unidentified human remains to identify close genetic DNA profiles or matches when compared to genealogical databases.
 - 1.1.1 The Department of Forensic Biology does not perform FIGG testing. The Department solely receives requests for FIGG testing from its customers. These requests pertain to evidentiary samples or unidentified human remains previously tested by the Department or unidentified human remains never tested by the Department. The Department acts as the liaison facilitating the transfer of samples between the FIGG requesting agency and the laboratory that will perform the FIGG testing.
 - 1.1.2 Extracts of previously tested evidence/exemplar samples or untested Unidentified Human Remains (UHR) samples in the custody of the Department are relinquished to the requesting customer and sent to a “wet lab” that will perform single nucleotide polymorphism or SNP testing. The results of this testing are then sent to a company where genetic genealogists will compare the results obtained from the wet lab to available genealogical databases. By evaluating the genealogy of those close familial matches, several possible close relatives of the perpetrator or victim may be established. Such efforts enable investigators or researchers to focus their investigation more closely in cold cases providing new leads.
- 1.2 A Familial Search (FS) is a deliberate, additional search of an evidentiary DNA profile against an offender database after a routine CODIS database search has failed to produce any direct matches.
 - 1.2.1 The Department of Forensic Biology does not directly perform Familial Searching of the CODIS database. The Department solely receives requests for YSTR testing from its customers so that Familial Searching may be requested at the NY State CODIS level. The requests for YSTR typing for the purposes of Familial Search pertain mainly to evidentiary samples previously tested by the Department.
 - 1.2.2 The department will perform YSTR testing on previously typed DNA extracts, newly tested evidence samples, Unidentified Human Remains (UHR), or missing person samples in the custody of the Department.

FORENSIC BIOLOGY ADMINISTRATIVE MANUAL

Investigative Genetic Genealogy Testing		
Status: Published		Document ID: 53563
DATE EFFECTIVE 03/21/2024	APPROVED BY Deputy Director	PAGE 2 OF 5

2 Receiving Requests

2.1 Customer requests for extract information:

2.1.1 Are sent via the OCME_IGG@ocme.nyc.gov email using the **Extract Inquiry Form** located on the NYC.Gov/OCME website. This email is monitored by the Department's Deputy Directors, Assistant Customer Liaison, the Assistant Director who oversees the FIGG/FS requests (FIGG coordinator), and the Assistant Director who oversees the Missing Person's Group.

2.1.2 Once the Extract Inquiry Forms are completed and extract/sample information is communicated to the customer, further testing can be requested on samples for the purposes of Familial Searching (FS) or requested to be picked up for Forensic Investigative Genetic Genealogy (FIGG) testing.

2.2 Customer requests to pick up extracts/samples to send for FIGG testing:

2.2.1 Are sent via the OCME_IGG@ocme.nyc.gov email using the **Genetic Genealogy Customer Tracking Form** located on the NYC.Gov/OCME website. This email is monitored by the Department's Deputy Directors, Assistant Customer Liaison, the Assistant Director who oversees the IGG requests, and the Assistant Director who oversees the Missing Person's Group.

2.3 Once an email request to pick up extracts for FIGG testing is received, the Director of Forensic Biology is informed by the FIGG coordinator so that OCME Executive Management can be made aware of the request.

2.3.1 The FIGG coordinator or a FIGG designee will contact the NYPD and the assigned DNA Coordinator for the respective borough that the request has been received.

2.4 If the request is for FIGG testing on Unidentified Human Remains, the request is handled by the Forensic Biology Missing Persons Group through the OCME_IGG@ocme.nyc.gov email.

2.4.1 Missing Persons Supervisor will inform the OCME Cold Case Group when requests for extract information are received. If further discussion on the case is required, the case will be presented to the OCME Identification Review Committee (IRC) members.

2.5 If the request for FIGG/FS is for an extract that is on a spotted card, this request will be forwarded to the QA/QC group using the "Fbio_Spotted Extract Request" Workflow in Qualtrax.

3 Fulfilling Requests

3.1 Once a request for information or FIGG/FS testing on evidence samples is received, the Forensic Biology FIGG team will require, at a minimum twenty (20) business days to complete the following and respond to the requestor:

FORENSIC BIOLOGY ADMINISTRATIVE MANUAL

Investigative Genetic Genealogy Testing		
Status: Published		Document ID: 53563
DATE EFFECTIVE 03/21/2024	APPROVED BY Deputy Director	PAGE 3 OF 5

- 3.1.1 Verify the case information listed on the submitted form is correct.
- 3.1.2 Have the case file(s) pulled if it is a hardcopy case record or refers to the LIMS record if it is electronic.
- 3.1.3 Makes sure the requested sample(s) names indicated on the submitted form are correct in relation to previously tested sample name(s).
- 3.1.4 Determine if extract and its associated extraction negative(s) are still available after previous testing was concluded.
 - 3.1.4.1 If the extract is on a spotted card, the sample will need to be re-extracted and quantified internally, see *Recovery of Spotted DNA Extracts from Whatman FTA Elute Microcards* in the *STR Procedures Manual*.
 - 3.1.4.1.1 If the request is for an extract that has evaporated and needs reconstitution, the sample will be reconstituted and re-quantified and the new volume and concentration will be communicated to the customer.
- 3.1.5 The NYPD and DNA Coordinator for the respective DAO are notified as to how much extract is available for testing.

4 Releasing Samples

- 4.1 Releasing the sample to the requesting agency for FIGG testing is dependent on the initial concentration of DNA present in the sample, the volume of sample remaining and the “wet lab” that has been chosen to perform the FIGG testing (some labs require a higher concentration of DNA to perform IGG testing). Both agencies must agree to submitting a sample for FIGG testing as the amount needed for FIGG testing may exhaust the amount remaining and will not be available for further routing forensic testing.
 - 4.1.1 Upon discretion of the Director, samples may be turned over in their entirety to the requestor without first determining the volume of extract remaining due to Forensic Biology time and staffing limitations.
 - 4.1.2 Packaging material for the shipment of the extracts will be provided by the requesting agency and brought to the OCME on the day the extracts will be released.
 - 4.1.3 The release of the samples to the requesting agency will be done by the Assistant Customer Liaison, the Missing Persons Group, or a member of the FIGG team.
 - 4.1.3.1 If FIGG testing has been agreed upon by all parties, a member of the FIGG team or Missing Persons Group ensures that the requested case extracts are sealed with paraffin and placed in a sealed envelope/individual bag before relinquishing the sample(s) to the requestor.

FORENSIC BIOLOGY ADMINISTRATIVE MANUAL

Investigative Genetic Genealogy Testing		
Status: Published		Document ID: 53563
DATE EFFECTIVE 03/21/2024	APPROVED BY Deputy Director	PAGE 4 OF 5

- 4.1.4 For spotted extracts, complete the *Spotted Extract Card Tracking Sheet*, with the location of samples as needed, including any transfers to external agencies.

5 Documentation

- 5.1 The FIGG team or Missing Persons Group completes the “For Internal Use Only” section of the *Extract Inquiry Form*. The form is converted to PDF and attached to the relevant LIMS record, placed in the hard copy case record, or placed in the digitized case record folder.
- 5.2 When a sample is released, the FIGG team or Missing Persons Group will update the chain of custody via the *Extract Release Chain of Custody* and completes the “For Internal Use Only” section of the *Investigative Genetic Genealogy Customer Tracking Form*. These forms are converted to PDFs and attached to the relevant LIMS record, placed in the hard copy case record, or placed in the digitized case record folder.
- 5.3 Familial Search requests made through the *YSTR Testing Request for Familial Search Form* are converted to PDF and attached to the relevant LIMS record, placed in the hard copy case record, or placed in the digitized case record folder.
- 5.4 The FIGG/FS database is filled out by FIGG designee with all relevant case and requested sample information. The database is maintained in Qualtrax (Ideagen Quality Management).
- 5.4.1 Familial Searching requests are also communicated through the Qualtrax system to the CODIS Administrator and Manager upon entry of the case into the FIGG/FS database.

6 Follow-Up Activities

- 6.1 The FIGG coordinator ensures there are regularly scheduled meetings between should the Department’s Deputy Director, and the Assistant Director who oversees the Missing Person’s Group to follow-up with DAO and NYPD for updates on FIGG/FS testing.
- 6.2 If a potential suspect is identified through FIGG/FS testing, any exemplars submitted for testing and comparison to the associated case evidence profile(s) will be assigned to the original case analyst or technical reviewer as applicable. If neither are available, the case will be randomly assigned by the FIGG coordinator.
- 6.3 Re-extraction of sample(s), other than spotted extracts, may be necessary in some cases where previous extract has evaporated, has been discarded, exhausted, or has an insufficient quantity for FIGG/FS testing. Re-extraction is sample-type dependent and will be done on a case-by-case basis upon evaluation of the case and approval by Laboratory Management. When this is needed the *Re-extraction, Reconstitution or Re-quantitation Form* will be filled out by the FIGG coordinator or a designee and the form will be communicated out to the customer.

FORENSIC BIOLOGY ADMINISTRATIVE MANUAL

Investigative Genetic Genealogy Testing		
Status: Published		Document ID: 53563
DATE EFFECTIVE 03/21/2024	APPROVED BY Deputy Director	PAGE 5 OF 5

- 6.3.1 Evidence will not be accepted by OCME to obtain a more complete profile for FS or a more useful profile for FIGG testing. Any exception to this must come in the form of management approval.