## **HISTORY**

In 2000, the FBI Laboratory initiated the National Missing Person DNA Database (NMPDD) program to assist in the identification of missing persons and unidentified human remains (UHR) using the Combined DNA Index System (CODIS). Currently, the FBI Laboratory's Mitochondrial DNA Unit (mtDNAU) and Nuclear DNA Unit (nDNAU) share the administrative and technical duties associated with the NMPDD program. The DNA profiles generated by the NMPDD program are placed into one of the three different indices within the National DNA Index System (NDIS): the Missing Persons Index, the Relatives of Missing Persons Index, or the Unidentified Human Remains (UHR) Index. It is the mission of the FBI Laboratory's NMPDD program (and its affiliated regional laboratories) to process and enter missing person-related mitochondrial and nuclear DNA profiles into CODIS (at no cost to the submitting agency) and thus provide investigators with the means to use biological evidence for the potential identification of missing and unidentified persons on a national level.

It is important to note that all samples submitted to the NMPDD program are analyzed for the sole purpose of identifying missing persons and UHRs and that the profiles generated from NMPDD samples cannot be used for any other database or criminal investigative purpose. Once an NMPDD sample is analyzed, any suitable DNA profile(s) is entered into the NMPDD and a Laboratory report(s) is issued to the contributing agency detailing the DNA typing results and describing which, if any, DNA profiles were suitable for uploading into CODIS. All remaining evidence is then returned to the submitting agency. If appropriate, a portion of the submitted sample(s) may be stored in the NMPDD repository for future testing using new DNA identification methods. Again, any potential future testing of an archival sample(s) will be conducted for the expressed purpose of identifying missing persons or unidentified human remains.

## **SAMPLE SUBMISSION**

Questions regarding submission of samples to the NMPDD should be directed to the FBI Laboratory's Evidence Control Unit (ECU) at 703-632-8360, Mitochondrial DNA Unit (mtDNAU) at 703-632-7572, or Nuclear DNA Unit (nDNAU) at 703-632-8446. In general, FBI Field Offices should submit NMPDD samples directly to the FBI Laboratory. Local and state agencies should contact the NMPDD program prior to submitting samples as it is critical that any submitting agency have completed all required forms and that this information accompany all evidence submissions. Currently, either the FBI Laboratory or one of its regional laboratories will conduct the mitochondrial and/or nuclear DNA testing on all NMPDD samples. If a nuclear DNA

profile has been previously uploaded into CODIS and the sample is only being submitted to the FBI Laboratory for mitochondrial analysis, please make this clear in the accompanying communication and include the sample's CODIS identifier.

All submissions to the NMPDD program for analysis must be accompanied by an incoming letter describing the samples being submitted. For the submission of UHRs, a copy of all anthropological, odontological (dental), autopsy, and investigative reports must be included. Law Enforcement personnel must witness the collection of reference samples from Biological Relatives of Missing Persons and must complete the NMPDD Consent and Information Form (FD-935). The identity of the donor must be confirmed by a valid, government-issued photo identification card. All missing person and UHR cases must be packaged separately. At this time, the FBI Laboratory is only able to accept 5 missing person or UHR cases from a given agency each month.

Please submit all samples for NMPDD testing to the FBI Laboratory's ECU at the following address:

FBI Laboratory
Evidence Control Unit
Samples for National Missing Person DNA Database
2501 Investigation Parkway
Quantico, Virginia 22135

Please mark the package with 'EVIDENCE' near the mailing label to designate for the Laboratory that it contains evidence. Unidentified human remains must be sent via a traceable carrier (FedEx or U.S.P.S. registered mail). Local and state agencies sending samples to a FBI Regional Laboratory should contact the FBI's mtDNAU for additional shipping information.

Local agencies requesting assistance with Missing Persons cases should contact the NMPDD program directly for submission information. If a FBI Case ID Number has already been assigned to an open FBI case (e.g. 7A - kidnapping), the original case number should be used. Samples submitted directly to the NMPDD program will be assigned the 301 classification by the FBI Laboratory upon receipt. It is important that the correspondence accompanying all NMPDD program submissions clearly state that the samples need to be routed to the NMPDD program for analysis.

## **SAMPLE TYPES**

Samples that Originate from the Missing Person: Samples from missing individuals such as blood, buccal, tissue specimens (medical biopsy samples), teeth (baby or adult), contact lenses, and/or hair are suitable for testing and direct comparisons. Items believed to have been used by a missing individual such as toothbrushes and hairbrushes must be submitted together with a confirmatory sample from a biological mother, father, child and/or sibling.

Samples from Two or More Biological Relatives of Missing Persons: Reference samples from biological relatives should be collected using FBI Blood Cell Collection kits available through most FBI Field Offices or the FBI Laboratory. Alternatively, 3 to 4 oral swabs can be collected from each biological relative. Individuals from whom oral swabs are being collected must not have consumed food or drink; chewed gum; or chewed, dipped, or smoked tobacco products for at least 15 minutes prior to sample collection. Oral swabs must be taken using sterile cotton-tipped applicators. The swabs should be pressed against the inside of the donor's cheek and rubbed while exerting pressure in a circular motion for approximately 15 seconds. The swabs scrape and trap cells that are on the inside surface of the mouth and must be air dried before placing them back into their original paper sleeve and sealing the sleeve with evidence tape. A Consent and Information Form (FD-935) must be completed for each relative's sample and is included in each collection kit. All samples should be labeled with the donor's name and the FBI Case ID Number, local law enforcement case number, and/or the NCIC (National Crime Information Center) or ViCAP (Violent Criminal Apprehension Program) number(s). If possible, samples from two or more biological relatives should be submitted for a missing person with samples from parents and offspring being the most useful for comparison purposes. If only a single biological relative is available, please contact the FBI Laboratory to determine if the samples are eligible for CODIS entry. Please use the table below when obtaining samples from relatives as it lists biological relationships in their order of usefulness for kinship analysis.

Biological Mother

4. Biological Sibling (sister/brother)

2. Biological Father (with mother)

5. Maternal Relative

3. Biological Child

6. Paternal Relative (only if the missing person is a male)

Samples from amnesia victims, infant abduction victims, or other memory or mentally

challenged individuals should also be collected using the blood cell collection kit or oral swabs.

Unidentified Human Remains: Unidentified human remains suitable for analysis and entry into the database include skeletal samples, teeth and/or tissue samples. FBI Bone Collection Kits are available through most FBI Field Offices or the FBI Laboratory. All sample bags or containers should be labeled with the local law enforcement case number or FBI Case ID Number and the name of the contributing agency. All skeletal samples must be accompanied by an anthropological report preferably generated by a member of the American Board of Forensic Anthropology (ABFA). Medical Examiner or Coroner reports can be submitted as well. Generally, three bones should be submitted for UHR cases. Skeletal elements suitable for DNA testing include (in order of preference):

Femur (upper leg bone)
Long Bones (Tibia, Humerus, Fibula, Ulna or Radius)
Mandible with intact teeth (Lower Jaw)
Foot Bones
Skull
Hand Bones
Vertebrae
Ribs
Pelvis

All skeletal samples should be placed into the FBI's Bone Collection Kit or a paper bag, protected from damage with padding, and sealed with evidence tape prior to shipment. All teeth and dental samples must be accompanied by an odontological report preferably generated by a member of the American Board of Forensic Odontology (ABFO). Medical Examiner or Coroner reports can be submitted as well. The FBI Laboratory prefers teeth which have not been restored (no fillings or crowns), powdered, or cut. Teeth suitable for DNA testing include (in order of preference):

Unrestored Molar
Unrestored Premolar (Bicuspids)
Unrestored Cuspid (Canine Tooth)
Unrestored Anterior Tooth (Front Tooth / Incisor)
Restored Molar
Restored Premolar (Bicuspids)
Restored Cuspid (Canine Tooth)
Restored Anterior Tooth (Front Tooth/Incisor)

The FBI Bone Collection Kit includes two envelopes for the submission of teeth. Teeth can also be placed into separate envelopes or plastic bags. Again, all sample bags or containers should be labeled with the local law enforcement case number or FBI Case ID Number and the name of the contributing agency.