

## FORENSIC BIOLOGY TRAINING MANUAL

Program Overview		
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### Program Overview

The purpose of the training program is to provide analysts with the theoretical and practical means necessary to perform reliable testing. For staff members who are DNA Interpreting Analysts, this includes training to learn how to present information competently in court. By having a multi-phase program of practical exercises, written assignments, and oral examinations, an analyst's weak points should become obvious, and the staff can work with the analyst to bolster this aspect of his/her knowledge and competency.

Newly hired/promoted staff is trained to perform a variety of different procedures, each relating to analyzing physical evidence for DNA typing. Each trainee progresses through a series of training modules; the modules correspond to duties in the laboratory: evidence examination, sexual assault kit processing, exemplar processing, extraction, quantitation, and PCR amplification and typing. The modules selected depend on the job title of the trainee. Completion of the complete set of required modules is necessary for a trainee to become a reporting analyst.

Current staff is trained in new procedures as they are added. For each new technique implemented an analyst must successfully complete the training module before using the procedure in casework. If a current analyst's job duties change or retraining is necessary, supplemental training is done using the training module for that technique. Successful completion of the module is required before the analyst will be allowed to perform the technique in casework. Successful completion of each module is documented on the competency tracking sheet or via a certificate of completion issued by the Training Group.

During training periods, staff should spend as much time as possible in training in order to expedite the process and help it to proceed more smoothly. This means that flexible or compressed time schedules, attendance at professional meetings and participation in special projects will not generally be allowed.

In total, the training will cover the theoretical and practical aspects of forensic biology. In particular it covers aspects of evidence examination, identification of physiological fluids, molecular biology, separation technology, interpretation of complex DNA results, statistical concepts as they relate to forensic DNA analysis, and court testimony.

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### A. Training – evidence examination and serological methods

The goal of training and competency testing in the classical forensic biology methods is to establish consistency of performance between individual analysts and to maintain the highest possible level of performance over time. These analytical procedures for identifying physiological fluids are the foundation on which further individualization (DNA testing) is based, and their behavior and limitations must be understood.

The classical forensic biology training program is monitored by the Director, Deputy Directors, Assistant Directors, and/or Criminalist IV supervisor. The training may be provided by any Criminalist I or higher who is competent and has the appropriate level of experience (generally, at least three months of casework experience performing the specific procedure).

### B. Training - DNA analysis

The goal of training and competency testing in the DNA laboratory is to establish consistency of performance throughout the laboratory and to maintain the highest possible level of performance over time.

The DNA training program is monitored by the Director, Deputy Directors, Assistant Directors, and/or Criminalist IV supervisor. The training may be provided by any Criminalist II or higher who is competent and has the appropriate level of experience (generally, at least three months of casework experience performing the specific procedure).

The trainee may not interpret DNA results (STR CE processing and signing DNA reports) until they become a DNA Interpreting Analyst. This means that they (1) meet or exceed the degree and educational requirements as defined by the applicable “FBI Quality Assurance Standards for Forensic DNA Testing Laboratories (2) have a minimum of six months of documented forensic human-DNA lab experience, (3) successfully completed all training modules, (4) successfully completed a written exam, oral exam, and DNA moot court. They will be expected to manage their DNA cases and write DNA reports for their supervisor’s signature in the interim.

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*If any new or additional federal and/or state requirements are imposed, they must be met by an analyst prior to interpreting and reporting DNA results.*

**Failure to satisfactorily complete competency tests, written or oral examinations, DNA mock court, required courses, or other required training activities, within a reasonable time frame after the beginning of training, may constitute grounds for demotion or termination.**

### C. Training record

The training is documented and maintained in a training record. The training record may contain notes, results, photographs, etc. generated during training. In addition, for each topic the date and initials of the trainer should be documented. The direct supervisor should regularly review the contents of the training record for accuracy and completeness.

The training record is the property of the Department of Forensic Biology and will be retained by the Department.

### D. Training schedule

A training schedule must be provided to each trainee and all scientific staff responsible for any aspect of the training. Because the training schedule affects many aspects of department operations, it should be adhered to as carefully as possible. Each module has adequate time allotted for the training.

For Criminalist I's the training is limited. Once competency is attained in a module, the trainee may be given a one or two week assignment in that technical rotation performing analysis on casework samples.

For Criminalist II's and above, the training is continuous and does not include intermediate assignments to technical rotations. Once all required training modules and DNA moot court is complete, the trainee joins the pod/functional group system.

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### E. Roles and responsibilities

Any analyst that is training full time or returning from leave and undergoing refresher training reports directly to the Criminalist IV training supervisor.

Those awaiting training and given temporary assignments report directly to the supervisor of the group and/or team they are assigned to.

#### **Training Team**

The training team is responsible for periodic review and/or revision of the Training Manual and reference articles.

The training team is responsible for preparation of training schedules, training assignments, and training records. This includes scheduling of training given by OCME staff other than those from the Department of Forensic Biology.

The training team is responsible for ensuring that practice samples and competency test samples are prepared.

The training team is responsible for ensuring that reference material is available.

The training team is responsible for maintaining the training records of current analysts.

#### **Trainee**

The trainee is expected to be ready by no later than an agreed upon time in which there is directly supervised training (observation or demonstration of a technique). A more flexible schedule may be possible on days where the trainee is working on practical exercises, practice samples, or competency tests.

The trainee is expected to do the required readings and be prepared to answer questions from the trainer or their supervisor on the topics as they are covered.

The trainee is expected to work on and complete the written questions during the time period of the training module and/or lecture. They should not be postponed until the end of hands-on training.

The trainee is responsible for getting all the necessary training signatures and for compiling all required training documentation.

Controlled versions of Department of Forensic Biology Manuals only exist in the Forensic Biology Qualtrax software. All printed versions are non-controlled copies.

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At the completion of training the trainee is responsible for providing the complete training record to the Training Team for review.

### Trainer

The trainer is expected to be ready to go no later than an agreed upon time in which there is directly supervised training (observation or demonstration of a technique). The trainer must realize that training has the priority; meetings or other tasks may have to be postponed. *If the assigned trainer finds he/she is unavoidably unable to perform the training, the scheduled trainer must make arrangements for the training to be re-assigned.*

The trainer is responsible for reinforcing the information from the required reading and lectures by discussing each technique in detail during the training, including theoretical and practical aspects.

The trainer must be available for questions on days allocated for the module.

The trainer must review any paperwork/documentation/records generated during the demonstration of a technique by a trainee; the review should include checking for completeness and accuracy.

### Supervisor

The direct supervisor of the trainee has the primary responsibility for monitoring the trainee's progress. The supervisor must plan on regularly spending time with the trainee, for example, by scheduling weekly or biweekly meetings in order to:

- Discuss the topics covered by the required reading and document completion of the reading.
- Review the answers to the module assessment questions.
- Review the training record for completeness and accuracy.
- Review, determine and document the successful completion of competency tests.

The training supervisor is responsible for helping the trainees choose cases for DNA mock court, may act as prosecutor, and prepare them for testimony.

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The (future) direct supervisor may act as defense attorney for DNA mock court.

### **Technical Leader**

The technical leader is responsible for final determination of the readiness of the trainee to enter the rotation. This includes:

- Final review of the training record, including review of competency tests as needed. The Technical Leader may designate a training supervisor and/or Assistant Director to assist in this review.
- Final review of the module completeness. The Technical Leader may designate a training supervisor and/or Assistant Director to assist in this review.
- Evaluation of the oral examination, including any needed remediation. The Technical Leader may designate a DNA supervisor and/or Assistant Director to assist in the evaluation and remediation of the oral exam.
- Determination of satisfaction of state and/or federal requirements, including review of college transcripts, course syllabi, and/or textbooks as needed.

The technical leader is responsible for issuing the notification of completion of training and the notification of achievement of DNA Interpreting Analyst status.