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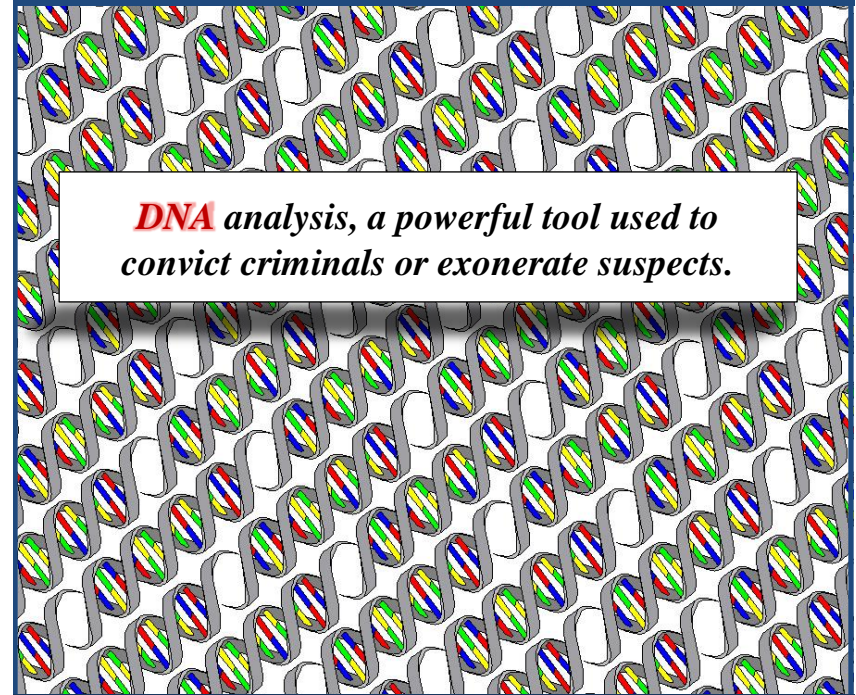
**FLORIDA DEPARTMENT OF
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Biology/DNA Laboratory and the DNA Investigative Support Database



***DNA** analysis, a powerful tool used to
convict criminals or exonerate suspects.*

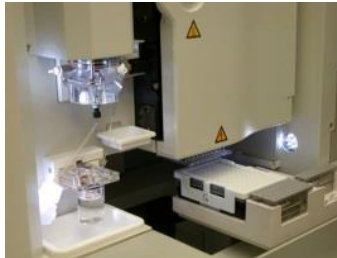
Florida Department of Law Enforcement
Rick Swearingen, Commissioner

Biology/DNA

Casework in the forensic laboratory consists of identifying biological stains such as blood, semen, and saliva on pieces of evidence submitted by law enforcement agencies throughout the state. Typical items of evidence include clothing, sexual assault evidence kits, liquid blood samples, dried blood stains, knives, guns, bed linens, etc.



Once a stain is identified, STR (short tandem repeats) DNA (deoxyribonucleic acid) testing is performed both on the questioned item and on standard samples from persons that may be involved in the case (typically suspects and victims). The results from the questioned stains are compared to the results of the standard samples to determine who could, or could not, be the donor of those stains.



DNA results can be used in a trial where the analyst will testify regarding the DNA match and its statistical significance. The results of a stain from a case may be submitted to the CODIS (Combined DNA Index System)

to be searched against local, state, and national casework index files and convicted offender profiles in the state and national databases.



DNA (deoxyribonucleic acid) is the “building blocks of life.” It contains the coding information for the formation and function of an organism. In humans, over 95% of DNA is the same - coding for common characteristics such as two arms, two legs, etc. The remaining regions of DNA vary from person to person. Some of these regions code for physical characteristics such as eye and hair color. There are also areas of extreme variations between individuals that do not code for physical characteristics. These highly variable regions are of specific interest to the forensic community because they are used to distinguish between individuals.

STR (short tandem repeats) DNA testing examines thirteen different areas (markers) of DNA that have been found to be highly variable.

These thirteen markers have been standardized in the United States to allow the comparison of testing results from one state to another.

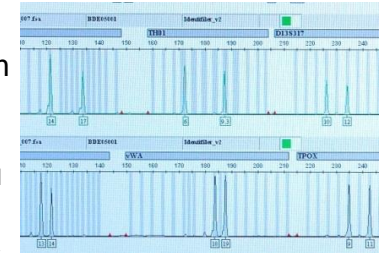
DNA Database

The FDLE DNA Investigative Support Database was created by F.S. 943.325. The law requires the establishment of a statewide DNA database containing DNA samples submitted by persons convicted of any felony offense or certain misdemeanor offenses or arrested for felony offenses as defined by law¹.



Additionally, the statewide DNA database shall include DNA records and samples necessary for the identification of missing persons and unidentified human remains, including DNA samples voluntarily contributed by relatives of missing persons.

Upon receipt of the collection kits, the DNA samples are processed and analyzed. The results of these analyses are entered into the state Combined DNA Index System (CODIS) database. Crime laboratories throughout the state may forward the results of DNA analyses performed on questioned samples from unresolved cases into the state CODIS database for comparison to qualifying offender profiles.



¹ 943.325(3)(b) DNA samples collected under paragraph (a) from persons arrested for any felony offense or attempted felony offense in this state are subject to sufficient funding appropriations passed by the Legislature and approved by the Governor according to the following schedule:

1. July 1, 2011, all felonies defined by chapters 782, 784, 794, and 800.
2. January 1, 2013, all felonies defined by chapters 810 and 812.
3. January 1, 2015, all felonies defined by chapters 787 and 790.
4. Beginning January 1, 2017, all felonies defined by chapter 893.
5. Beginning January 1, 2019, all remaining felony offenses.