

Florida Department of Law Enforcement's Convicted Offender DNA Database: Transition from RFLP to STR

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The DNA Database was established in Florida in 1990. Florida has been utilizing RFLP (restriction fragment length polymorphism) to make matches between DNA profiles developed from crime evidence to DNA profiles developed from convicted offenders. The first few years the number of matches were very limited mainly due to the small number of convicted offender analysis as well as the small number of no suspect case analysis being performed within the state of Florida

Since 1995 several factors have contributed to a pronounced increase in the number of matches made to the DNA Database. The DNA Database has become more efficient in DNA analysis by utilizing chemiluminescence and automated techniques that have increased output 300% with no additional personnel. In 1995 more offenses were added to the list requiring inclusion into the database as well as personnel increases statewide which allowed more non-suspect case analysis. This resulted in a steady increase in the number of matches to the DNA Database each year. The first matches to the DNA database were in 1992 and there were only 3 to 5 matches each year until 1995. The matches have increased significantly starting in 1995 until the present. In 1998 we are averaging 5 to 6 sexual assault or homicide matches per month. Currently there have been 155 CODIS matches and over 256 investigations assisted. This success has required the DNA Database to have a longer transition period between the phasing out of RFLP analysis and the conversion to Short Tandem Repeat (STR).

At the present time in Florida there are six case-working laboratories still utilizing RFLP analysis until STR validation and implementation are complete. The number of matches per month coupled with the number of laboratories that will still be utilizing RFLP for the next year has forced the database to plan on dual analysis, RFLP and STR, until at least January 1, 2000.

The DNA Database system in Florida has made plans to purchase more automated equipment that will hopefully give the unit the capability to handle the STR analysis of the 51,000 samples already collected. In addition to the current database, we hope to make legislative changes to increase the number of offenses requiring collection with the ultimate goal of collecting all the convicted felons within the Florida's criminal justice system within the next 5 years. The Florida Department of Law Enforcement has also been aggressive in seeking funding to help obtain contract laboratories to assist in analyzing a portion of the 51,000 samples already collected so as to reduce the backlog in a timely manner.

The state of Florida continues to be CODIS compliant and will do all analysis using the 13 core STR loci that have been designated. The state of Florida plans to contract out six of ten thousand offender samples this fiscal year as well as to analyze 5,000 samples in-house. The database has begun STR analysis of offender samples on a limited basis and once date flow issues are developed and tested the number of offender samples analyzed within FDLE will increase drastically in 1999.