**Course: Advance Bio Informatics**

**Module Title: Combined DNA Index System Database**

**Module No: 106**

**CODIS**

CODIS stands for Combined DNA Index System.

It is a DB of DNA profiles, both from Criminal, or voluntary samples.

* DNA is collected from a crime.
* Run the DNA profile.
* Compare it to profiles in CODIS.
* Like fingerprints
* But comparing DNA

**Index in CODIS**

* **Offender Index:** profiles of people convicted of crimes.
* **Arrestee Index:** contains profiles of people arrested for committing crimes.
* **Forensic Index:** contains DNA profiles taken from crime scene evidence.
* **Missing Persons Index:** consists of two profiles of missing persons references e.g. relatives.

**Benefits of STR in CODIS**

* Forensic science takes advantage of the population's variability in STR lengths, enabling scientists to distinguish one DNA sample from another.
* Two individuals with same 13 - loci DNA profile: 1 in 1 billion or greater.

**Number of STR in CODIS Locus on chromosome 7**

The 13 core STRs vary in length from 100 to 300 bases. For instance, the D7S820 STR is relatively simple and contains between 10 and 11 repeats of GATA.

* It would have inherited a copy of D7S820 with 10 GATA repeats from one parent, and a copy of D7S820 with 11 GATA repeats from his or her other parent.

