**Course: Advance Bio Informatics**

**Module Title: DNA Fingerprinting**

**Module No: 109**

**DNA Fingerprinting**

* A forensic scientist will need two pieces of DNA to be compared.
* For example, DNA discovered at crime scene should be compared to a DNA sample taken from a suspect.

**Steps**

* Comparison of repeating DNA sequences.
* Match b/w two samples.

**DNA extraction from cell**

**1. Collecting cell from sample:**

* Two meters of DNA in cell.
* Collect cells from the sample with buccal swab.
* Place the swab into Eppendorf tube.

**2. Burst cells open to release DNA:**

* Add the lysis solution to the tube to separate the cells.
* LS break Cell membrane& nuclear envelope causing cells to burst open& release DNA. It also removes histones proteins from DNA.

**3. Separate DNA from proteins and Debris:**

* Cells have stayed in warm to for such a time that DNA is freed from cells.
* Salt causes proteins & other cellular debris to clump together.
* Place tube into micro centrifuge.

Inside the centrifuge tube spin around and debris &heavy proteins sink in bottom of tube and DNA strands remains distributed throughout liquid.

**4. Isolate concentrated DNA:**

* Add the liquid containing DNA in separate tube.
* Now add isopropyl alcohol to tube.
* DNA is not soluble in this alcohol so it comes out and it can be seen with naked eye.
* DNA is collected at bottom tube after placing in centrifuge.