

# *Forensic genetics*

# Genetic test

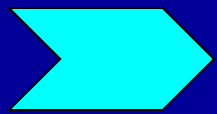
- *heritable disease*
- *inheritable disease*
- *diagnosis of heritable disease*
- *personal identification*

**DNA** = deoxyribonucleic acid  
= carrier of heredity

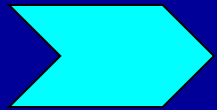
 *genomic (nucleic) DNA - ncDNA*

 *mitochondrial DNA - mtDNA*

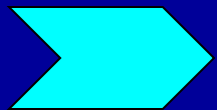
# Biological material suitable for DNA analysis



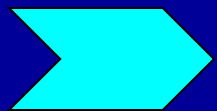
*blood, blood stains*



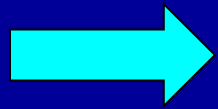
*sperm, sperm stains*



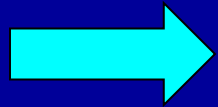
*post-coital samples*



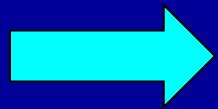
*hair, skin, nails*



*saliva, oral swabs*



*bones*

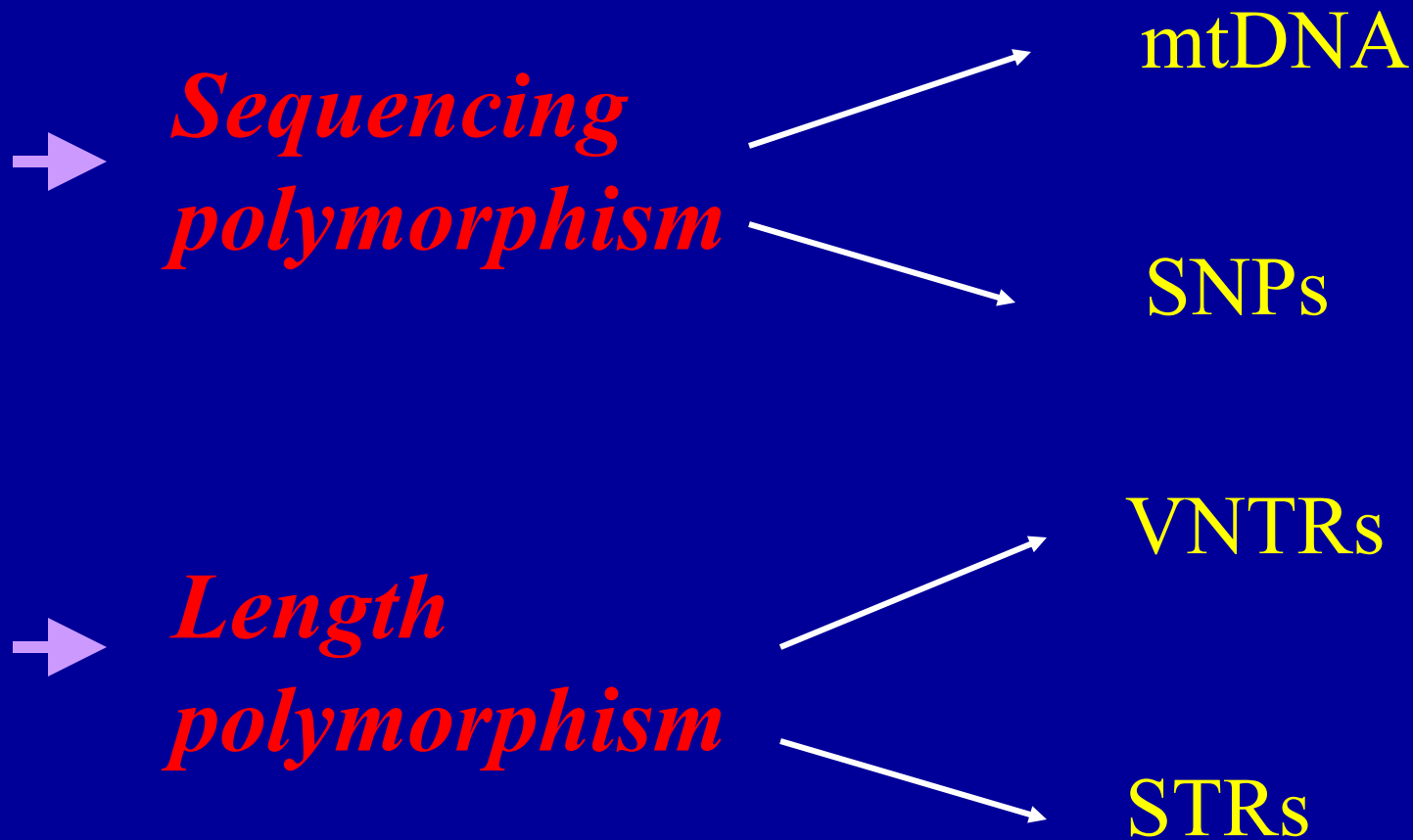


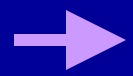
*teeth*



*tissue of muscles and  
other organs*

# Types of DNA polymorphisms





## *Polymorphisms of sex chromosomes*

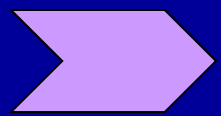


Amelogenin

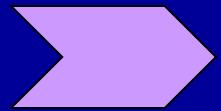


Y-chromosome

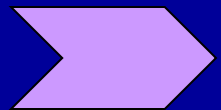
# Types of DNA analysis



*Paternity (parentage) testing*



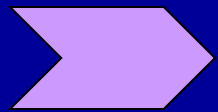
*Maternity testing*



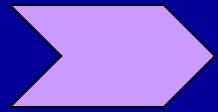
*Identification*



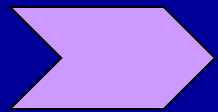
# Methods



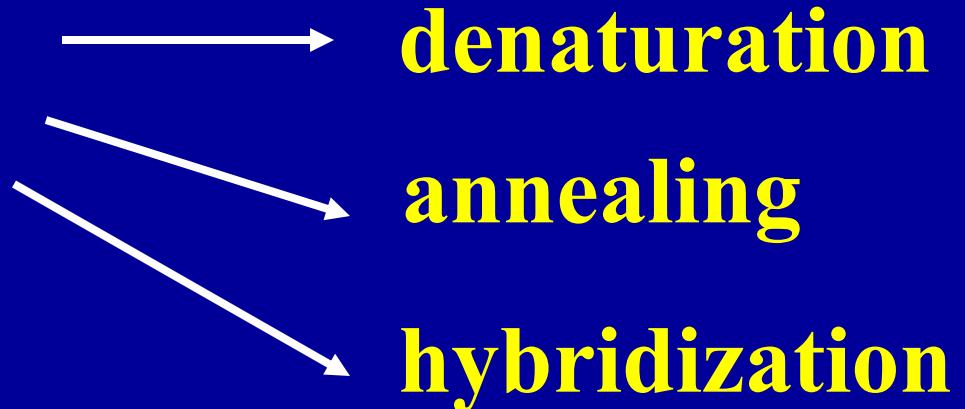
*Isolation of DNA*

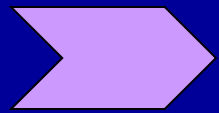


*RFLP*

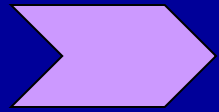


*PCR*

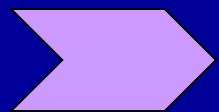




*Separation of DNA fragments*



*Hybridization*



*Sequencing*