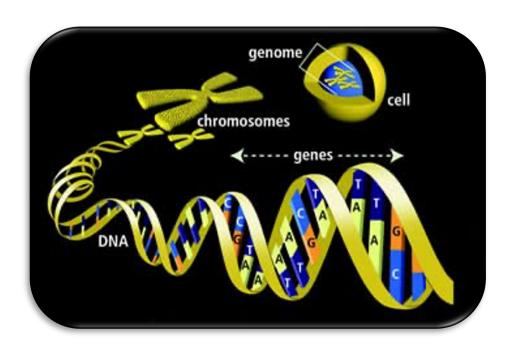
DNA Extraction From Blood



- The genome is the genetic material of an organism.
- The genomes of almost all organisms are DNA.
- The <u>only exceptions</u> being some viruses that have RNA genomes.
- DNA-protein complexes called chromosomes.



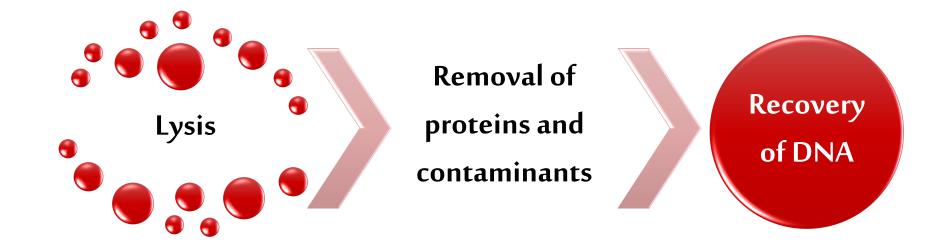
DNA extraction:

- DNA isolation is an essential technique in molecular biology.
- It is the first step for studying DNA!!
- Practically DNA can be isolated from any part of human body.
- → Choose the correct source!



Method of DNA extraction:

• Many different methods and technologies are available for the isolation of genomic DNA.



Practical Part



• To isolate pure genomic DNA from Rat blood sample.

Principle:

- Physical and chemical processes of tissue homogenisation.
- Cell permeabilisation, cell lysis (using hypotonic buffers).
- Removal of nucleases, protein degradation, protein precipitation, solubilisation of nucleic acids.
- Various washing steps then recover the DNA.

Results:

• Cloudy precipitation can be seen by the naked eye, and it represent the isolated DNA.

• The **concentration**, **purity**, **and integratiy** of the extracted nucleic acid may need to be determined.