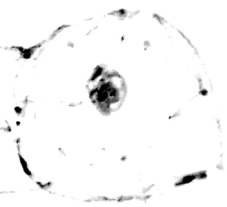
# 06.08.22 Bio-Informatics Lecture-2

class-3

# chromatin

- Heterochromatin
  - not carry any type of genetic material.
  - inactive on reproduction system
  - no crossing over.
- Euchromatin
  - carry any type of genetic material
  - active on reproduction system
  - → Crossing over.



# Introduction to DNA

- one class of macromolecules contained in chromatin are called nucleic acid.

Early 20th century research into the identity of nucleic acids culminated with the conclusion that nucleic acids are polymer or repeating chain

of smaller, similarity structured molecules known as monomers. Because of their tendency to be long and thin, nucleic acid polymers are commonly known as strands.

The nucleid acid monomer is called nucleotide and is used as a unit of strand length. Each nucleotide is formed of three parts:

- a sugar molecule
- a negatively ion charged called a phosphate, and a
- a compound called a nucleobase.

Polymerization achieved as the sugars of one nucleotide bonds to the phosphate of the next nucleotide in the chain which forms a sugar-phosphate backbone for the nucleic acid strand.

# strand:

→ strand is the commonly used term for a polymer of nuelid acid. RNA contains single strand, whereas DNA contains two strands linked together by base pair bonding and twisted into a duble helix shape.

HW
→ Ribose
→ Deoxribose
→ Cross-over

next clm
Central dogma.