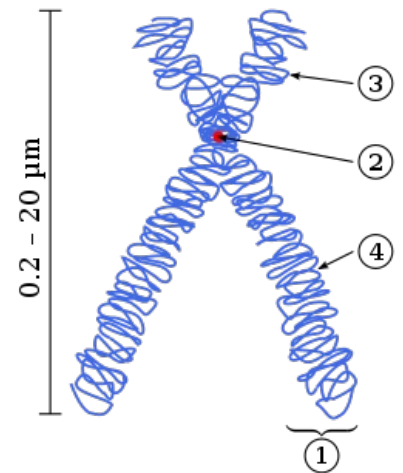


Structure of the metaphase chromosome

- During metaphase, a chromosome is made up of two sister **chromatids**.
- Each chromatid contains one linear molecule of dsDNA, histones and non-histone proteins.
- Both chromatids are connected at the point of primary constriction - **centromeres**.
- The centromere divides each of the chromatids into two arms:
 - **short arm p** (petit);
 - **long arm q** (follows pv in the alphabet).
- Some chromosomes have a secondary constriction that separates the satellites.
- The morphology of the chromosome is determined by its length, the mutual ratio of the arms and the centromeric index (the ratio of the length of the short arm to the total length of the chromosome).
- At the ends of both arms are telomeres, repetitive sequences that are essential for maintaining chromosome integrity.



Chromosome structure (schematic):
(1) = chromatid, (2) = centromere,
(3) = short arm, (4) = long arm

Links

related articles

- Centrometer
- Chromosome
- Karyotype
- Types of metaphase chromosomes