

- Karyokinesis - Cell div. in fungi is kln as

Karyokinesis, with help of spindle pole bodies.

- Here equal division of genetic material.

- Cell division of dinoflagellate - Dinomitosis.

- Here chromosome separate with attachment to N.B.

- Polyteny - Endoduplication takes place.

- Free nuclear division - Repeated karyokinesis ^{not} followed by cytokinesis.

C- Mitosis - Mitosis will be arrested at metaphase stage. So it is called as mitotic position.

Aneuploidy - Also arrest spindle formation.

- Brachymiosis - Failure of meiosis II.

Restitution nucleus - mitosis proceeds normally upto early anaphase stage but later on abnormality comes, i.e. only one nuclear memb. is formed total chromosomes laid present in same nucleus.

Gametic meiosis - Terminal meiosis

Zygotic meiosis - Initial meiosis

Sporic meiosis - Intermediate meiosis

Karyotyping -

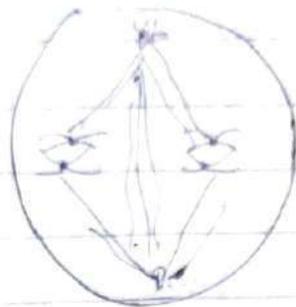
- Constitutive heterochromatic region is stained.

- DNA are denatured with help of bisodium citrate and stained with GIMS A - So G-banding.

Q-banding - Quinacrine mustard.

- * Polytene chromosomes are pr only in larvae but not in adult because their further division doesn't takes place.

Metaphase I



- In mitotic metaphase each chromosome arranged at equatorial plate. but in meiotic metaphase I, each pair of chr. come on ~~an~~ equatorial plate.
- Spindle fibres are attached to each chromosome at kinetochore pt. of centromere in meiotic metaphase I but in mitotic metaphase each chromatids are attached to s. fibre on kinetochore pt.

Anaphase I

Chromosomes moves towards opp. pole but in mitotic anaphase chromatids ~~to~~ move at opp.

Telophase I

- Nucleolus & NM reappear.
- * Interkinesis may or may not be present.

Meiosis II

Meiosis II is 100% similar to mitosis (process)
 - Here chromatids separated.

- * In some cells eg. in Tritium telophase I & prophase II both are ~~om~~ omitted (been)

In ~~metamorphogenesis~~ ^{meiosis} } Simultaneous - Tetrahedral arrangement
 } Successive - J-shaped arrangement

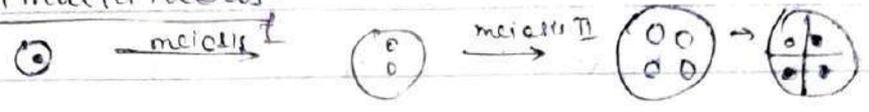
and from anaphase I cell proceed directly to metaphase II.

Cytokinesis

May be of two type.

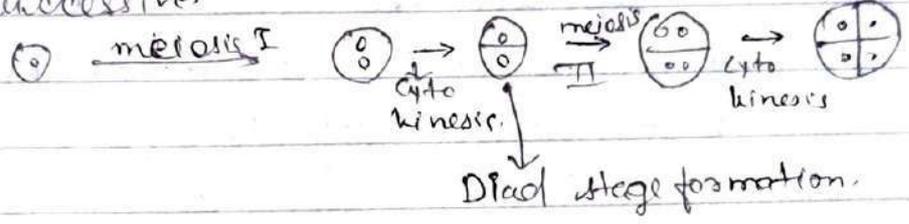
- (1) Simultaneous
- (2) Successive

(1) Simultaneous



Cytokinesis takes place finally after meiosis II.

(2) Successive



→ In simultaneous type, centripetal cytokinesis takes place

→ In successive type, centrifugal type cytokinesis takes place

Differences b/w Meiosis II & Mitosis:

1. Before mitosis interphase was present but before meiosis II it is not found.
2. In mitosis both arms of chromatids were same but in meiosis II it is diff. due to crossing over.

Amitosis

- Nuclear memb. don't disappear.
- Equal distribution of chr. in daughter cells is not present.



eg. Macronucleus of paramecium.
 Nodal cells of chara, algae.