

Cell Division

Lab:8

The life cycle of organisms , which reproduce sexually, consist of two phases :

A: Formation of sex cells and fertilization : involves a major process called meiosis. (gametogenesis)

B: Differentiation , growth and maturation : occurs during embryonic and postembryonic development, and it involves a process called mitosis.

Events from the beginning of one cell division to the beginning of the next are collectively called **the cell cycle** . the cell cycle is divided into four phase : **G₁, S, G₂ and M** .the M phase represent the division of the **nucleus and cytoplasm** ,F1.

1- G₁ phase : cell growth and duplication of organelles ,cytoplasm. takes ~ 12 hours.

2-S phase: chromosome (DNA) replication ~6 hours.

3- G₂ phase: more cell growth and final preparation to divide ~ 6 hours

4- M phase: Mitotic phase ~ 30 minutes.

*A normal cell completes the cycle within **24 hours** .

