



MITOSIS, CELL DIVISION.

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Resumo

This text has as objective explain mitosis's phases through a summarized study. Cell division's cycle covers many stages, beginning with a parent cell being duplicated, resulting at the end two daughter cells. The interphase, initial mitosis's phase, is divided in four moments: G₀ phase, being the instant when the organelle's polarization begins in the cell; G₁ phase, whereby occurs genetical material's separation in the nucleus; S phase, responsible for genetic material's replication and G₂ phase that complete interphase with the genetical material's union, which was replicated previously. After interphase, starts M phase, beginning with prophase. At prophase, the chromosomes condense and the spindle apparatus begins to be built outside the nucleus between two centrosomes, which were replicated and separated. Besides organelle's position being well defined, also occurs nucleus's degradation. After this, the metaphase starts. That is when occurs the disintegration of the cell's nucleus membrane. During this phase, the chromosomes stay short and locate in the cell's equatorial region, between the spindle poles. Besides this, the microtubules kinetochore fix the sister chromatids to the spindle apparatus's opposite poles. At the next phase, the anaphase, occurs the sister chromatids's separation, with the objective of form two chromosomes. Each chromosome will be pulled to their respective spindle poles, the microtubules stay short, and the spindle poles are pulled away. During the telophase, the last mitosis's phase, the chromatids sets will arrive at the poles and be condensed. The nuclear envelope will be formed giving rise to new nucleus and the cytoplasm's division starts with the contractile ring's formation. We can conclude that mitosis is a division cell's process that has five phases and may be used for healing, growth, regeneration, and gametogenesis (at the asexual reproduction).

Key words: cell; nucleus; genetical material; chromosomes; microtubules.