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Commentary Open Access

Abstract

Cell cycle is a highly ordered process that results in the duplication and transmission of genetic information from one generation to the next.

The cell cycle is divided into various phases

1. G1
2. S phase
3. G2
4. M phase.

Interrupting every two mitotic phases, an interphase exists comprising of G1, S and G2 phases. Both extracellular and intracellular signals are responsible for governing the cells to progress through different stages of cell cycle. The G1 phase is associated with the cell growth. It is the preparatory phase for DNA synthesis. The S phase is devoted to DNA synthesis while G2 is another growth phase. The M phase comprises of the following stages sequentially:

Suspension culture: cells divide and grow while oating in the culture medium 2. Monolayer culture: cells need the substratum for their growth and division.

Experimental Model System

Cell culture serves as a good model system for studying:

e mechanism of basic cytological and biochemical processes taking place in any particular organism

e host-pathogen interaction and its consequence

Process of senescence

Monoclonal antibodies

Vaccines

Hormones

Other useful proteins

Maintenance

Media and growth requirements

Physiological parameters

pH= 7.2-7.5

osmolality of the medium must be maintained

Temperature= 37^{o}C