METHODS AND COMPOSITIONS FOR INCREASING LONGEVITY AND PROTEIN YIELD FROM A CELL CULTURE

ABSTRACT

Disclosed herein are compositions and methods for increasing the longevity of a cell culture and permitting the increased production of proteins preferably recombinant proteins, such as antibodies, peptides, enzymes, growth factors, interleukins, interferons, hormones, and vaccines. By transfecting cells in culture with an apoptosis-inhibiting gene or vector, cells in culture can survive longer, resulting in extension of the state and yield of protein biosynthesis. Expression of the apoptosis-inhibitor within the cells, because it does not kill the cells, allows the cells, or an increased fraction thereof, to be maintained in culture for longer periods. This invention then allows for controlled, enhanced protein production of cell lines for commercial and research uses, particularly the enhanced production of growth factors, interferons, interleukins, hormones, enzymes, and monoclonal antibodies, and the like. The method preferentially involves eukaryotic cells in culture, and more advantageously mammalian cells in culture.

Fig.1