Abstract

Method and Device for Selecting Accelerated Proliferation of Living Cells in Suspension

The present invention relates to a method and a device for selecting accelerated proliferation of living cells in suspension. The culture apparatus (2) of the present invention enables cells to proliferate in suspension over unlimited periods of time. Natural selection results in the accumulation of genetic variants which are increasingly better adapted to the chosen culture conditions. The organisms used can be prokaryotic or eukaryotic. The organisms used can be naturally occurring organisms or genetically modified organisms. The culture apparatus of the present invention is also suitable for using continuous, periodical or conditional culture conditions. The physical and chemical characteristics of the culture media used can be chosen by the user. The requirement that a population of cells proliferates exclusively in suspension in continuous culture conditions is satisfied by the periodical transfer of the organism suspension from a first culture vessel into a second culture vessel. After the transfer, the first culture vessel is subjected to a sterilizing treatment and the sterilizing agent is optionally neutralized, so that the first culture vessel is ready for the culture to be transferred back from the second culture vessel. The second culture vessel is then sterilized and neutralized.