

## ROLE OF $\gamma$ C-CYTOKINES (IL-2, IL-7, AND IL-15) IN THE REGULATION OF CELL DEATH OF MEMORY T-LYMPHOCYTES INDUCED BY ACTIVATION

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The role of  $\gamma$ c-cytokines (IL-2, IL-7, and IL-15) in the regulation of apoptotic death of memory T-cells induced by activation under *in vitro* cultivation was evaluated. It was revealed that the action of IL-2 in combination with a TCR activator is aimed at increasing the number of CD45RO<sup>+</sup>CD95<sup>+</sup> T-lymphocytes with a simultaneous decrease in the number of viable T-cells, which suggests a pro-apoptotic effect of IL-2 under conditions of restimulation. The effect of IL-7 and IL-15 in the *in vitro* activation model, in contrast, leads to an increase in the number of live T-lymphocytes in CD45RO cultures (compared to samples with the addition of activator only) amid an increase in the number of CD8<sup>+</sup>CD95<sup>+</sup> T-cells with phenotype central memory (TCM). Changes induced by IL-15 are aimed at reducing the content of CD4<sup>+</sup>CD95<sup>+</sup> T cells in CD45RO<sup>+</sup> cultures. Thus, a dose-dependent positive effect of IL-2 on clonal expansion and negative on T-cell viability was shown. Whereas IL-7 and IL-15, on the contrary, retain the viability of T-lymphocytes by participating in the generation of a pool of long-lived memory T-cells.

**Keywords:** memory T-lymphocytes, central memory T-cells, effector memory T-cells, common gamma chain ( $\gamma$ ) cytokines, activation, activation-induced cell death