
Imunomodulasi Limfosit T dan Makrofag Mencit bertumor Mamme oleh Ekstrak Minyak Buah Merah

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The development of a tumor has a strong relationship with cellular immunity mediated by T lymphocytes. Some researchs showed that the extracts of red fruits can increase host immunity but its scientific base was still unclear. The purpose of this study was to explain the role of ethanol extract of red fruits oil (ERFO) as an immunostimulator on *in vitro* T lymphocytes and peritoneal macrophages (PM) culture of mammary tumor bearing mice.

T lymphocytes were isolated from the spleen of mice after two weeks of mammary tumor transplantation. The isolation was performed by using sterile nylon net and passed through nylon wool. Isolated T lymphocytes were cultured *in vitro* on RPMI 1640 medium. The culture of T lymphocytes and PM was divided into five groups containing 2 ppm of fraction 1-5 of ERFO, 2 groups of negative control (medium and DMSO), 3 groups of positive control (β -carotene, tocopherol, linoleic acid). The proportion of CD3, CD4, CD8, CD16, CD19 and IL-2R α (CD25), cells on T lymphocytes culture and CD25, ICAM-1 (CD54) and CD64 cells of PM cultures were measured at day-3 using flow cytometry.

Our study showed that fraction 2 of ERFO, β -carotene and tocopherol cause increasing the CD4, CD16, CD19 and CD25 expression; fraction 3 and 4 on the CD8 expression on T lymphocytes cultures; and fraction 1 on the CD64 expression of PM cultures.

Keywords: red fruit, T lymphocyte, macrophage, mammary tumor