lymphocyte (CTL) activity against allogenic tumor cells in vivo.

[PB4-5] [04/21/2000 (Fri) 10:30 - 11:30 / [1st Fl, Bldg 3]]

Induction of secretory and cellular activities by pneumococcal teichoicated fragments in macrophages

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Bacterial components and their derivatives have been reported to mediate various immunomodulating activities and to activate immune cells including macrophage. In this study, the secretory and cellular macrophage response to teichoicated fragments from pneumococcal cell wall subcomponent were examined. Tumoricidal activity was measured by MTT assay and secretory molecules were assessed by biological assay. After stimulation of macrophages with teichoicated fragments (100㎍/ml) for 18hrs, secretion of TNF-α, nitrite and hydrogen peroxide were significantly increased as compared to medium-treated control. In addition, tumorcidal activity of teichoicated fragments-treated macrophages was enhanced, whereas production of IL-1 and IL-6, and phagocytic activity were not induced. These data suggest that teichoicated fragments is a potent inducer of macrophage secretory and cellular activities.

[PB4-6] [04/21/2000 (Fri) 10:30 - 11:30 / [1st Fl, Bldg 3]]

A muramyl dipeptide derivative [MDP-Lys(L18)] enhances antitumor immunity raised by an inactivated tumor vaccine.

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We examine the immunostimulating activity of MDP-Lys(L18), a lipophilic derivative of muramyl dipeptide (MDP) which is a biological subunit of bacteria cell wall, to augment antitumor immunity induced by X-irradiated tumor cells against highly metastatic B16-BL6 melanoma cells. Mice immunized intradermally (i.d.) with the mixture of X-irradiated B16-BL6 cells and MDP-Lys(L18) [Vac+MDP-Lys(L18)] followed by intravenous (i.v.) inoculation of 104 viable tumor cells 7 days after immunization, showed significant inhibition of experimental lung metastasis of B16-BL6 melanoma cells. The most effective immunization for the prophylactic inhibition of tumor metastasis was obtained from the mixture of 100 μg of MDP-Lys(L18) and 104 X-irradiatied tumor vaccine. Furthermore, immunization of mice with Vac+MDP-Lys(L18) 3 days after tumor challenge resulted in significant inhibition of lung metastasis of B16-BL6 melanoma cells in experimental lung metastasis model. Similarly the administration of Vac+ MDP-Lys(L18) 1 or 7 days after tumor amputation markedly inhibited tumor metastasis of B16-BL6 in a spontaneous lung metastasis model. When Vac+ MDP-Lys(L18) was i.d. administered 3 days after subcutaneous (s.c.) inoculation of tumor cells (5X105/site) on the back, mice treated with Vac+MDP-Lys(L18) showed significantly inhibited tumor growth of B16-BL6 cells on day 20. These results suggest that MDP-Lys(L18) is able to enhance antitumor activity induced by X-irradiated tumor vaccine to reduce lung metastasis of tumor cells, and is a potent immunomodulating agent which may be applied prophylactically as well as therapeutically to treatment of cancer metastasis.

[PC1-1] [04/21/2000 (Fri) 14:50 - 15:50 / [1st Fl, Bldg 3]]

Metabolism of acyclovir, ganciclovir and penciclovir in infected cells with