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We classify the immunotherapy as a part of major anticancer therapies. As one of the immunotherapy, dendritic cell, the most powerful antigen presenting cells(APCs) has been recognised to be the best gateway in immunotherapy. In this study, we assured that there is an activation of murine dendritic cell through the expression of IL-6 by using pedunculagin, a tannin being extracted from plant in order to use it for anti-tumor or anti-virus agents by activating dendritic cell. In vitro, we extracted the total RNA at 4, 8, 12, 24hrs after the administration of 1, 10, 100 $\mu$ g/ml of pedunculagin to dendritic cell of mouse. Additionally, IL-6 mRNA was analyzed by RT-PCR method. As a result, IL-6 mRNA increased in dose-dependant. This suggests that pedunculagin make proinflammatory cytokine increased and make T-cell and B-cell grown and proliferated in good manner.

[PB4-8] [ 10/18/2001 (Thr) 14:00 - 17:00 / Hall D ]

### Effects of ellagitannin on IL-12 expression.

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Tannins have been reported that they have a potential effect for anticancer, antiviral, and antiHIV. Particularly, ellagitannins, which are hydrolytic tannin, are the most popular tannins, which are mostly separated in study level. In this study, we studied to know on the expressive effect of Dendritic cells, which are the most effective antigen presenting cells(APC) using pedunculagin(hydrolytic ellagitannin) by way of the expression of IL-12. IL-12 activates NK cell and macrophage, and shows the antiviral effect by excreting INF- $\gamma$ . In vitro, the total RNAs were extracted from the murine dendritic cell at 4, 8, 12, 24hr after the application of 1, 10, 100 $\mu$ g/ml of pedunculagin without other stimulators. And we analysed IL-12 mRNA using RT-PCR method. In conclusion, IL-12 mRNA was increased in dose-dependent. These results suggest that pedunculagin activate TH1 cell induction, CTL differentiation as well as accelerating the increase of NK, LAK cell.

[PB4-9] [ 10/18/2001 (Thr) 14:00 - 17:00 / Hall D ]

### Effects of Pedunculagin on the IL-1 $\beta$ expression of dendritic cell

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Ellagitannins have been reported to enhance immune system. In this study, the effects of pedunculagin on dendritic cell were examined. Pedunculagin, an ellagitannin from *Alnus hirsuta* var. *microphylla*, Betulaceae, is a novel immunomodulator. This study was focused on the cytokines, which could be expressed by dendritic cells. Dendritic cells are known as the most potent antigen presenting cell, cause, dendritic cells could present the antigen to CTLs strongly other than any other APCs, such as macrophages, B cells, and Langerhans cells. To determine the effect of pedunculagin on murine dendritic cell-expressing interleukin-1 $\beta$  in vitro, total RNAs have been extracted from murine dendritic cell at 4, 8, 12, 24hr after the applications of 1, 10, 100 $\mu$ g/ml of pedunculagin without other stimulators. RT-PCR methods were used to analyze IL-1 $\beta$  mRNAs.

As a result, IL-1 $\beta$  mRNA expressions were significantly increased in dose-dependent. In conclusion, the pedunculagin enhanced IL-1 $\beta$  mRNA expressions. Moreover, these results suggest that pedunculagin enhance the proinflammatory cytokines and activate the lymphocytes for murine dendritic cells.