

6 th World Congress of Inflammation(2-6 August 2003, Vancouver, Canada)

Tuesday, 5 August 2003 Inflamm. res., Supplement 2 (2003)

16.6

SPERMINE AND SPERMIDINE SELECTIVELY SUPPRESS CD11A AND CD18 EXPRESSIONS OF HUMAN PERIPHERAL BLOOD MONONUCLEAR CELLS (PBMCs) AND INHIBIT CELLULAR FUNCTIONS RELATED TO LFA-1

K Soda, Y Kano, H Ueba, M Kawakami and F Konish¹

1-847 Amanuma, Saitama-city, Saitama, Japan, Saitama, 330-8503, Japan

The natural polyamines found in every living cell are known to be involved in cellular functions, but their role in immune function is still obscure. The recent studies have brought to light the importance of polyamines from extracellular sources. Here, we examined the effects of polyamines on the immune function of human PBMCs by adding polyamines to a culture medium. PBMCs were cultured in RPMI-1640 supplemented with 10% human serum. PBMCs cultured either with spermine or spermidine, but not putrescine, selectively decreased the mean fluorescent intensities of CD11a and CD18. This decrease was associated with the suppression of cellular functions related to LFA-1, such as the adhesion to human umbilical vein endothelial cells and the cytotoxic action of lymphokine-activated killer cells. No surface antigens other than CD11a and CD18 were suppressed. Cell viability was not decreased, and the cell activation by lectins was even enhanced.

掲載 : Inflammation Research 52 (supple.2): S120