Effect of *Kami-yunbueum* on the Psoriatic PBMCs

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Evidence that psoriasis is an immune-mediated disorder is based on laboratory studies, clinical observation and the use of targeted therapies.

Immunohistochemical studies have shown that the majority of lymphocytes in psoratic plaques are T cells which migrate into skin. There is also a predominant increase in TH1 cytokines, namely interferon gamma, in psoratic plaques. The efficacy of therapeutic agents that target T cells such as anti-CD4+ monoclonal antibodies, cyclosporin A, and interleukin-2 fusion toxin has provided further substantial evidence that psoriasis is a T-cell-mediated disease. DNA microarray is a useful technique for the analyses of thousounds of genes simultaneously and therefore is used for the observation of progression of psoriasis in this research.

Psoriasis lymphocytes total RNA was formulated by reference RNA obtained from 8 healthy volunteers' lymphocytes which did not have any sign of other immunological diseases.

In our experiments, equal quantities of each normal RNA (n=8) were mixed in one tube and appropriated as reference RNA, which was subsequently labelled with Cyanin-3. This reference RNA has a good advantage that eliminates the individual characteristics and provides a common criterion to analysis of patients gene profiles, which was labelled with Cyanin-5. The gene clustering data showed that gene expression pattern was clearly divided into two groups. The one was more increased and the other was more repressed in psoriasis patient lymphocytes than normal.

In order to see the effect of Kami-yunbueum on the psoriatic therapy we have carried out RT-PCR and FACS analyses. IL-7R, NF-AT5, CD 44 and Ras-GTPase were selected in the up-regulate gene group as well as Cyclin-dependent kinase inhibitor 2A, sphingosine

kinase 1 and Annexin 6 in the down-regulated group for the further analyses. The results showed that KYBE regulated the transcription level of IL-7R, CD44 and CDKI2A, and repressed the T cell activation.

Key words : psoriasis, lymphocyte, KYBE (*Kami-yunbueum* 加味潤膚飮), DNA microarray.