Gene expression profiling of peripheral blood mononuclear leukocytes from psoriasis patients identifies new immune regulatory molecules.

Koczan D, Guthke R, Thiesen HJ, Ibrahim SM, Kundt G, Krentz H, Gross G, Kunz M (2005) Gene expression profiling of peripheral blood mononuclear leukocytes from psoriasis patients identifies new immune regulatory molecules. *Eur J Dermatol* 15(4), 251-257.

Details

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Abstract

In the present report gene expression profiling of peripheral blood mononuclear cells (PBMC) from psoriasis patients suffering from severe generalized disease was performed comparing diseased stage with cured stage. By this means, 18 genes were identified which showed differential expression. The most significant differences were found for IL-8, annexin A3, cycloxygenase-2 (COX-2), cell cycle regulator G0S2, and pre-B cell enhancing factor (PBEF), all of which showed upregulation in the diseased stage. Microarray data were confirmed by real-time RT-PCR. Further analyses using support vector machines identified three pairs of genes (IL-8 - CDKN1C/p57, cyclooxygenase-2 - NR1D2, and desmocollin-2 - CDKN1C/p57) which allowed an accuracy of disease stage prediction of 86%, based on gene expression patterns. Taken together, this is the first large-scale gene expression study of psoriasis PBMC identifying candidate genes that might contribute to psoriasis immunopathogenesis. The genes identified in the present report and the molecular mechanisms underlying their regulation might serve as future targets for therapeutic

intervention in psoriasis.

Beteiligte Forschungseinheiten

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