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[\[PDF \(553K\)\]](#) [\[References\]](#)**DNA microarray analysis of changes in gene expression induced by 1,25-dihydroxyvitamin D<sub>3</sub> in human promyelocytic leukemia HL-60 cells**

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**ABSTRACT**

Using a DNA microarray, we analyzed about 16,600 genes for changes in expression associated with the differentiation of human promyelocytic leukemia HL-60 cells induced by 1 $\alpha$ ,25-dihydroxyvitamin D<sub>3</sub> (DVD). Many of the up-regulated genes could be correlated to differentiation-associated changes toward a monocyte/macrophage lineage, and many down-regulated genes could be correlated to repressed cell growth. The present study revealed the down-regulated gene expression of importins and exportins 1, 5, 7, and exportin-tRNA. Thus, the present results confirmed our previous findings of down-regulation of exportin 1 and exportin-tRNA by DVD. Gene expression of exportin 6 is suggested to be regulated differently from that of exportins 1, 5, 7, and exportin-tRNA. The down-regulation of nuclear transport factors may be deeply associated with the differentiation of HL-60 cells induced by DVD.

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