

ANKHD1 GENE EXPRESSION IS DOWNREGULATED BY THALIDOMIDE IN MYELOID CELL LINE AND MDS SAMPLES.

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The Ankyrin repeat and KH domain containing 1 protein (ANKHD1) is a protein homologue of *Drosophila* MASK (Multiple ankyrin repeats KH domain), which is known for its crucial role in photoreceptor differentiation, cell survival, and proliferation. It was demonstrated an upregulation of ANKHD1 mRNAs expression cells of patients with acute leukemia and multiple myeloma. The anti-tumoral role of thalidomide have been established in multiple myeloma or myelodysplasia and several possibilities like antiangiogenic, anticytokine, or immunomodulatory properties are thought to play a role. In order to assay the effect of thalidomide treatment in ANKHD1 expression, KG1 cell line or bone marrow cells of a patient with MDS (myelodysplastic syndrome), co-cultured or not with an adherent layer of MDS stromal cells were treated by 10^{-4} , 10^{-5} , 10^{-6} , 10^{-7} or 10^{-8} M thalidomide for 24 hours and the expression of ANKHD1 was analyzed by real-time PCR. A downregulation of ANKHD1 mRNAs expression was observed in KG1 cell line (>5-fold lower than the control in all concentrations tested) and in the MDS stromal sample (>5-fold lower than the control, but in a dose- dependent way). Therefore, the downregulation of ANKHD1 observed in leukemia cell lines and MDS samples induced by Thalidomide suggest its involvement in the hematopoiesis process and might indicate ANKHD1 as a target candidate to drug modulation.