# Characterization Of *RECK* Gene Expression And Its Alternative Isoforms In Melanoma Cells

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*RECK* encodes a membrane-anchored glycoprotein that suppresses both invasion and metastasis by negatively regulating matrix metalloproteinases, namely: MMP-2, MMP-9 and MT1-MMP. Previous studies showed a positive correlation between RECK expression in tumor samples and better prognostic for patients with lung, pancreatic and colorectal cancers. In the present study, we characterized the mRNA expression levels of *MMPs* (particularly: *MMP-2*, *MMP-9* and *MT1-MMP*) and their inhibitors: *TIMPs* (1-3) and *RECK* (canonical form and alternative isoforms, namely: *RECK B*, *RECK C*, *RECK D* and *RECK I*) in a panel of ten human melanoma cell lines that represent the different degrees of malignancy (radial growth phase - RGP, vertical growth phase - VGP and metastatic phase). The expression profiles of these genes were investigated through quantitative real time RT-PCR assays. Preliminary results indicate that mRNA levels of the *RECK* alternative isoforms in comparison to *RECK* canonical form tend to be higher in RGP/VGP cell lines than in metastatic cells. Specifically, *RECK C* isoform, that has an extra exon between exons 2 and 3 of the canonical form, is significantly increased in the RGP/VGP cells in comparison to metastatic cells ($p<0.01$). We also found a positive correlation between the expression of *RECK C* isoform and *TIMP-3*. Our results suggest that *RECK C* isoform might have an important role in melanoma model, distinct to the *RECK* canonical form. Better understanding of *RECK* gene regulation may contribute to uncover the mechanisms of tumor progression and to develop new strategies for cancer therapy.

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