Second International Symposium

'Prognostic and Therapeutic Implications of RKIP in Cancer'.

May 9-10, 2019,

Aquila Atlantis Hotel

Heraklion, Crete, Greece

Scope, Highlights and Insights

The First International Workshop on "*Prognostic and Therapeutic Implications of RKIP in Cancer*"' was held at UCLA in Los Angeles in March 2010. During this last decade, a plethora of new research investigations has emerged on the biology and functional roles of RKIP in cancer. Therefore, the Second International Symposium "*Prognostic and Therapeutic Implications of RKIP in Cancer*"' was organized and will be held on May 9-10, 2019 in Heraklion, Crete, Greece.

Raf-1 Kinase Inhibitor Protein (RKIP) was initially identified as a physiologically-relevant modulator of the Raf/MEK/ERK, and NF-κB signaling cascades. Since then, it has been found to modulate several additional signaling pathways, thus playing a vital role in preventing multiple pathological conditions including cancer progression and metastasis. RKIP has been shown to be a member of the metastasis suppressor gene (MSG) family. The expression levels of RKIP are decreased or absent in the majority of cancers, hence underlying the putative prognostic significance of RKIP expression in cancer tissues. Notably, restoration of RKIP expression not only inhibited metastasis in cancer cells transplantation mouse models, but also reversed a plethora of other tumor-associated functions. For instance, RKIP has been characterized as an immune surveillance gene product and with sensitizing activities over tumors resistant to cytotoxic chemo-immuno-therapies. Functionally, RKIP interferes with the metastasis and resistance cascades by regulating the activities of multiple metastasis- and apoptosis-related genes. The underlying molecular mechanisms of RKIP downregulation in cancer cells include, among others, overexpression of transcriptional repressors of RKIP or oncogenic miRNAs. Conceptually, one can restore RKIP expression by ectopic induction or by pharmaceutical targeting of its transcriptional repressors or miRNAs for inactivation.

The presence of functionally active RKIP in cancer cells, its anti-tumorigenic and sensitizing functions, as well as its anti-metastatic role, therefore, makes the restoration of RKIP expression a key novel multi-targeted approach. At this Symposium, world-renowned experts investigating RKIP at the biochemical, molecular and genetic levels have been invited to discuss novel advances of the involvement of RKIP in cancer biology and explore different options that could be employed to materialize the potential of targeting RKIP for anti-tumoral and anti- metastatic therapies.

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