Plan Overview

A Data Management Plan created using DMP Tool

Title: Role of RASSF9 in the pathogenesis of human melanoma

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Template: Template USP - Baseado no DCC

Project abstract:

Melanoma represents a significant clinical challenge due to its aggressive nature and propensity for metastasis. Recent discoveries in the genomics of melanoma have shed light on the role of various oncogenes and tumor suppressors in its pathogenesis. Among such genes, the RAS association domain family (RASSF) members have emerged as key players. This proposal seeks to elucidate the role of RASSF9, a lesser-studied member of the RASSF family, in the progression and pathogenesis of human melanoma. Preliminary evidence from our laboratory, using murine melanoma cell lines, suggests that RASSF9 may have critical functions in the pathogenesis of this type of cancer. We aim to corroborate and expand our findings using human melanoma cell lines. Initially, we will examine the relative expression levels of all RASSF members in human melanoma cell lines and verify how they respond to UV irradiation, a well-known stimulus linked to the initiation and progression of melanoma. We will then focus our efforts in investigating whether and how RASSF9 participates in the pathogenesis of melanoma. We will use lentiviral delivery systems to knock out or to overexpress the RASSF9 gene and then compare the modified human melanoma cell lines to the original ones in terms of their proliferative, migratory, and invasive capacities, as well as resistance to cell death induction. Our research will integrate a variety of methodological approaches, including cell and molecular biology, quantification of gene and protein expression, and functional assays. By establishing the relationship between RASSF9 activity and melanoma biology, we anticipate enhancing our understanding of melanoma pathogenesis, which could lead to the identification of new therapeutic targets and improvement in patient treatment.

Start date: 08-01-2024

End date: 07-31-2026

Last modified: 07-08-2024

Role of RASSF9 in the pathogenesis of human melanoma - Coleta de Dados

Detalhes dos dados coletados ou criados

Que dados serão coletados ou criados?

Data on resistance to cell death, proliferation, migration and invasion of original human melanoma cell lines and derivatives developed in our laboratory will be collected throughout this study

Como os dados serão coletados ou criados?

.All tests will be performed in triplicates and at least three independent experiments will be done. Data will be colected according to the technique used in each experiment