

ABSTRACT

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Evaluation of Epigenetic Alterations Induced by Treatment with Ultradilutions of *Viscum album* in Murine Melanoma Cells

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Preparations of aqueous extracts from *Viscum album* (VA), known as mistletoe, are used as an integrative approach in treating oncology patients. Previous studies conducted by our group using ultra-dilutions derived from VA mother tinctures in the in vitro murine melanoma model demonstrated modulation of cellular metabolism, oxidative stress, and the inflammatory cytokine profile. Considering that epigenetic mechanisms can regulate the expression of inflammatory mediators, the present study aims to evaluate the epigenetic profile of inflammation-related genes in B16F10 cells after treatment with VA ultra-dilutions. Specifically, we performed analyses of expression and plausible methylation sites of genes involved in the inflammasome complex formation, including ASC, Caspase 1, and NLRP3. In addition, the production of IL-1 and IL-18 cytokines was assessed in melanoma cells before and after treatment with VA ultra-dilutions at potencies of 12D, 200C, and 5LM. Preliminary results indicate that the treatment with 12D and 5LM VA potencies resulted in lower levels of inflammatory cytokines in the culture supernatants of B16F10 cells. However, evaluations are still ongoing, and further analyses will be performed. The findings from this work will provide unprecedented insights into the mechanisms of action of VA ultra-dilutions in the melanoma model.

Keywords: Mistletoe, homeopathic preparations, skin cancer, antitumor potential, inflammatory profile

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