Pristimerin Mediated Anticancer Potential in Multiple Myeloma

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Multiple myeloma (MM) is a hematologic malignancy characterized by the uncontrolled proliferation of malignant plasma cells in the bone marrow. This study explored the potential of Pristimerin (PS), a naturally occurring quinone methide triterpenoid, as a therapeutic agent against MM. This research aimed to elucidate the mechanisms through which PS induces cell death. Using MM cell lines (U266 and RPMI 8226) and series of assays, including cell viability tests, Annexin/PI dual staining (to detect apoptotic cells), and western blotting (to analyze protein expression). PS treatment of MM cell lines causes inhibition of cell viability via cell cycle arrest and induction of apoptosis. In addition, PS causes the suppression of STAT3, a key signaling molecule of JAK/STAT signaling pathway. Altogether, this study highlighted the anticancer potential of natural compound PS for the treatment of MM.

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