Induction of p53 without increase in p21WAF1 in betulinic acid-mediated cell death is preferential for human metastatic melanoma.


Source
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Abstract

Because betulinic acid was recently described as a melanoma-specific inducer of apoptosis, we investigated whether this agent was comparably effective against metastatic tumors and those in which metastatic ability and 92-kD gelatinase activity had been decreased by introduction of a normal chromosome 6. Human metastatic C8161 melanoma cells showed greater DNA fragmentation and growth arrest and earlier loss of viability in response to betulinic acid than their non-metastatic C8161/neo 6.3 counterpart. These effects involved induction of p53 without activation of p21WAF1 and were synergized by bromodeoxyuridine in metastatic Mel Juso, with no comparable responses in non-metastatic Mel Juso/neo 6 cells. Our data suggest that betulinic acid exerts its inhibitory effect partly by increasing p53 without a comparable effect on p21WAF1.

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