

RESVERATROL, A RED WINE CONSTITUENT, HAS ANTICARCINOGENIC PROPERTIES

Soleas, G.,³ Grass, L.,¹ Josephy, D.,¹ and Diamandis, E.P.^{1,2} Dept. of Laboratory Medicine and Pathobiology¹, University of Toronto, Toronto, Ontario, Canada M5G 1L5, Dept. of Pathology and Laboratory Medicine², Mount Sinai Hospital, Toronto, Ontario, Canada M5G 1X5, The Liquor Control Board of Ontario³, Toronto, Ontario, Canada M5E 1A4

Objectives: Resveratrol is a trihydroxystilbene compound, found at significant amounts in the skin of red and white grapes. During vinification, significant amounts of resveratrol are extracted and are found in red wine. Here, we examine if resveratrol has anticarcinogenic activities by using a mouse skin carcinogenicity model.

Methods: Briefly, CD-1 male mice, 5–6 weeks old, were housed in six cages of five mice each. The known skin carcinogen dimethylbenz (a) anthracene (DMBA) was applied to the shaved rear flank of each mouse at a concentration of 200 nmol, dissolved in 200 μ L of acetone. Biweekly, for 18 weeks, the phorbol ester, TPA, a known promoter of tumorigenesis, was applied to the same area at a concentration of 5 nmol per 200 μ L of acetone by itself, or with resveratrol at amounts of 1, 5, 10 and 25 μ mol. The negative control was 200 μ L of acetone alone.

Results: We found the following: 1) The mice receiving only acetone had no tumors developed. 2) The mice receiving DMBA + TPA had an average of 14 tumors per animal. Resveratrol, at concentrations of 1, 5, 10 and 25 μ mol, reduced the number of tumors by 23, 33, 70 and 78%, respectively. The differences between the control mice vs mice receiving only carcinogen vs resveratrol plus carcinogen, were statistically highly significant.

Conclusions: These data support the view that the red wine constituent resveratrol has potent anticarcinogenic activities.

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