

## **Grape seed extract may protect against skin cancer**

By Stephen Daniells, 27-Mar-2007

**Proanthocyanidin-rich extracts from grape seeds may prevent skin cancer by boosting the immune system, says a new study that used hairless mice to model human sun exposure.**

Researchers from the University of Alabama told attendees at the 233rd national meeting of the American Chemical Society that hairless mice supplemented with proanthocyanidins extracted from **grape seed** had 65 per cent fewer skin tumours than mice not supplemented with the compounds.

The research adds to a small but expanding number of other studies that suggest the grape seed extracts may benefit skin "from within". Indeed, only recently researchers in Germany reported that 42 subjects randomly assigned to receive a daily supplement of Masquelier's Original OPCs (oligomeric proanthocyanidins) Anthogenol (100 mg/day) had reduced reddening of the skin by 13 per cent when exposed to UV radiation (*Skin Pharmacology and Physiology*, Vol. 20, pp. 43-49).

The new study, led by Santosh Katiyar, supplemented the diet (AIN76A) of SKH-1 hairless mice with grape seed proanthocyanidins (0.2 and 0.5 per cent, w/w) and exposed them to UVB (180 mJ/cm<sup>2</sup>) radiation to induce skin cancer.

Katiyar told attendees in Chicago that supplementation with grape-seed extracts at both levels (0.2 and 0.5 per cent) reduced tumour incidence by 20 and 35 per cent, respectively, tumour multiplicity by 46 and 65 per cent, respectively, and tumour size by 66 and 78 per cent, respectively, compared to control mice with no supplementation.



*In an additional experiment using C3H/HeN mice, the researchers investigated the mechanism behind the apparent benefits, and found that supplementation with the grape seed extracts appeared to reduce the UVB-induced increase in the cytokine interleukin-10 (IL-10), previously reported to suppress immune function.*

*On the other hand, the proanthocyanidin-rich extracts were found to increase the production of IL-12, reported to be a stimulator of the immune system.*

*"Together, our data suggested that prevention of photocarcinogenesis by grape seed proanthocyanidins is mediated through development of anti-tumour immune responses, which are regulated by IL-12 induction in mice," said Katiyar.*

*According to the European School of Oncology, there are approximately 460,000 new cases of skin cancer in Europe each year, with survival rates improving thanks to more awareness and earlier detection.*

*Source: 233rd national meeting of the American Chemical Society*

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*"Dietary grape seed proanthocyanidins inhibit photocarcinogenesis through prevention of UV-induced suppression of immune responses via induction of interleukin-12 in mice"*

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