

## Cancer chemopreventive activity of the prenylated coumarin, umbelliprenin, in vivo

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### Abstract

Umbelliprenin is a prenylated compound, which belongs to the class of sesquiterpene coumarins. In continuation of our earlier in-vitro finding, we determined to assess the cancer chemopreventive activity of umbelliprenin in vivo by using a two-stage carcinogenesis assay of mouse skin tumors induced by peroxyntirite as an initiator and TPA (12-O-tetradecanoylphorbol-13-acetate) as a promoter. In this assay, treatment with umbelliprenin along with peroxyntirite/TPA delayed the formation of papillomas up to week 9, and approximately 32.3 and 86.6% of the mice bore papillomas after 11 and 20 weeks of promotion, respectively. Umbelliprenin reduced the number of tumors per mouse by 40% after 20 weeks of promotion compared with the control group. Interestingly, this is equal to the corresponding value (40%) for curcumin, used as a reference standard compound in our study. In addition, the pattern of tumor promotion was slower in mice treated with umbelliprenin compared with the curcumin. Therefore, umbelliprenin might be valuable as a cancer chemopreventive agent. © 2009 Lippincott Williams & Wilkins, Inc.

### Reaxys Database Information

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#### Indexed Keywords

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*Medline is the source for the MeSH terms of this document.*

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