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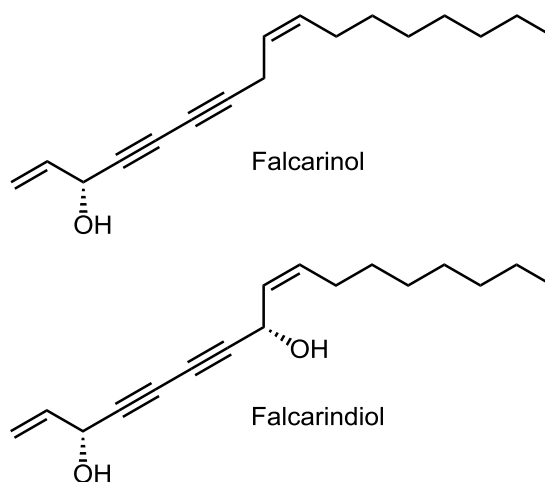
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Dietary polyacetylenes, falcarinol and falcarindiol, prevents the formation of neoplastic lesions in the colon of azoxymethane-induced rats

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The polyacetylenes falcarinol (FaOH) and falcarindiol (FaDOH) are found in many food plants of the Apiaceae family [1]. Carrots are a major dietary source of these polyacetylenes. Feeding azoxymethane (AOM)-induced rats with carrots and purified FaOH have previously been shown to inhibit neoplastic transformations in the colon [2]. FaOH and FaDOH have also shown to have a synergistic effect *in vitro*, resulting in a significant increased cytotoxic activity [3]. Based on these findings the antineoplastic effect of FaOH and FaDOH purified from carrots (purity > 99%) was investigated in the AOM-induced rat model [4]. Twenty rats received rat diet containing 7 µg FaOH per g feed and 7 µg FaDOH per g feed and 20 rats were controls receiving only rat diet. Then carcinogenesis was induced in all 40 rats with the carcinogen AOM. All animals received the designated diet for 2 weeks before AOM induction and continued on the designated diet throughout the experiment. Rats were euthanized 18 weeks after the first AOM injection and macroscopic polyp/cancers were measured, harvested and stained for histology. The number of small ACF clusters was reduced by 26.6% ($P < 0.001$), number of large ACF clusters reduced by 56.7% and ($P = 0.027$), and finally the number of tumors larger than 3 mm were reduced by 83.3% ($P = 0.032$) in treated rats compared to controls. In conclusion dietary supplements with FaOH and FaDOH reduced the number of neoplastic lesions as well as the growth rate of the polyps suggesting a preventive effect of FaOH and FaDOH on the development of colorectal cancer.



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