

Search

for

Limits

Preview/Index

History

Clipboard

Details

Display

Show

All: 1

Review: 0



About Entrez

Text Version

Entrez PubMed

Overview

Help | FAQ

Tutorial

New/Noteworthy

E-Utilities

PubMed Services

Journals Database

MeSH Database

Single Citation Matcher

Batch Citation Matcher

Clinical Queries

Special Queries

LinkOut

My NCBI (Cubby)

Related Resources

Order Documents

NLM Catalog

NLM Gateway

TOXNET

Consumer Health

Clinical Alerts

ClinicalTrials.gov

PubMed Central

1: Cancer Lett. 2000 Oct 31;159(2):183-7.

[Related Articles, Links](#)

Erratum in:

- o Cancer Lett 2000 Dec 20;161(2):251.



Chemopreventative activity of crude hydroxymatairesinol (HMR) extract in Apc(Min) mice [corrected].

Oikannen SI, Pajari AM, Mutanen M.

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We studied the effects of a lignan, hydroxymatairesinol (HMR), and rye bran on intestinal tumor development in adenomatous polyposis colimultiple intestinal neoplasia (Apc)(Min) mice. HMR showed a strong chemopreventive effect in this animal model. The mean number of adenomas in the small intestine was significantly lower (26.6+/-11.0, P<0.05) in mice fed the TNS tumor promoter insulin and HMR when compared with the insulin and insulin/rye bran fed mice (39.6+/-8.9 and 36.0+/-7.4, respectively). HMR resulted in normalization of beta-catenin levels in adenoma tissue, indicating that HMR mediates its chemopreventive effect through the Apc-beta-catenin pathway. In the cytosolic fraction, beta-catenin level in adenoma tissue was significantly elevated (P=0.008-0.013) in all the diet groups as compared with that of the surrounding mucosa. In the nuclear fraction, beta-catenin in the insulin (3.15+/-2.9 relative units) and insulin/rye (5.17+/-6.94 relative units) groups was also significantly higher (P=0.003-0.009) in the adenoma tissue when compared with the surrounding mucosa (0.5+/-0.5 and 0.35+/-0.39 relative units). However, HMR was able to restore nuclear beta-catenin level of the adenoma tissue (0.41+/-0.25 relative units) to the level found in the surrounding mucosa (0.36+/-0.28 relative units).

PMID: 10996730 [PubMed - indexed for MEDLINE]

Display

Show