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1: Exp Biol Med (Maywood). 2004 May;229(5):417-24.

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Chemopreventive effects of hydroxymatairesinol on uterine carcinogenesis in Donryu rats.

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Hydroxymatairesinol (HMR), obtained from the heartwood of spruce (*Picea abies*), has been demonstrated to exert chemo-preventive effects on the development of mammary tumors in rats. To examine the influence of HMR on uterine carcinogenesis, adult Donryu rats were initiated with a single intrauterine treatment of N-ethyl-N'-nitro-N-nitrosoguanidine (ENNG) at 11 weeks of age and fed thereafter 0, 200, or 600 ppm HMR mixed in the soy-containing diet until 15 months of age. Incidences of uterine adenocarcinoma in both 200 and 600 ppm HMR-dosed groups were significantly reduced to 11% and 15%, respectively, less than 50% of 0 ppm, at the end of the experiment ($P < 0.05$). A delay in the start of persistent estrus by HMR was observed at 8 months of age compared with controls given carcinogen alone. From urinalysis, HMR was metabolized mainly to enterolactone and hydroxyenterolactone. These findings suggest that HMR or its metabolites exert chemo-preventive effects in the rat ENNG-uterine carcinogenesis model.

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