

Suppression of DMBA/croton oil-induced mouse skin tumor promotion by *Ardisia crispa* root hexane extract

ABSTRACT

Ardisia crispa (Family: Myrsinaceae) has been used as a traditional medicine for various ailments. Previous studies showed that *Ardisia crispa* possesses antimetastatic and anti-inflammatory properties. Nevertheless, research done on the plant is still limited. Therefore, the present study was designed to evaluate the suppression effect of *Ardisia crispa* root hexane (ACRH) extract on 7, 12-dimethylbenz () anthracene (DMBA)-induced mice skin tumor promotion in ICR mice with topical application twice weekly for 10 weeks. Results showed significant difference between treatment groups (mice treated with 30 mg/kg, 100 mg/kg and 300 mg/kg of ACRH extract; denoted as group I, II and III respectively) for tumor incidence and tumor burden ($P < 0.05$). Significant reduction in tumor incidence (20%), tumor burden (1.5 ± 0.50), tumor volume (2.49 ± 1.70) and delayed latency period of tumor formation was observed in group I (30 mg/kg) in comparison to carcinogen control. This study indicates that ACRH extract could be a promising skin tumor promotion suppressing agent at a lower dosage (30 mg/kg). Further studies are required to elucidate the underlying mechanism(s) leading to this effect.

Keyword: DMBA skin carcinogenesis; Tumor incidence/burden; Cancer chemoprevention; *Ardisia crispa*