

## Abstract

The modulating effect of ethanol/acetone (E/A) soluble fractions, prepared from methanolic extracts of processed and unprocessed rooibos (*Aspalathus linearis*) and honeybush (*Cyclopia intermedia*) as well as green (*Camellia sinensis*) teas was

established in a two-stage mouse skin carcinogenesis assay. Topical application of the tea fractions prior to the tumour promoter, 12-O-tetradecanoylphorbol-13-acetate (TPA), on ICR mouse skin initiated with 7,12-dimethylbenz[a]anthracene (DMBA) suppressed skin tumorigenesis significantly ( $P < 0.001$ ) with the green tea E/A fraction exhibiting a 100% inhibition, unprocessed honeybush 90%, processed honeybush 84.2%, processed rooibos 75% and unprocessed rooibos 60%. The green tea fraction, with the highest flavanol/proanthocyanidin content, also exhibited the highest protective activity (99%) against hepatic microsomal lipid peroxidation, and completely inhibited skin tumour formation. Differences in the flavanol/proanthocyanidin

and flavonol/flavone composition and/or non polyphenolic constituents are likely to be important determinants in the inhibition of tumour promotion by the herbal tea E/A fractions in mouse skin.

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