

Flavonoids in *Helichrysum pamphylicum* Inhibit Mammalian Type I DNA Topoisomerase

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DNA topoisomerases are important targets for cancer chemotherapy. We investigated the effects of a methanolic extract of *Helichrysum pamphylicum* on mammalian DNA topoisomerase I via *in vitro* plasmid supercoil relaxation assays. The extracts manifested a considerable inhibition of the enzyme's activity in a dose-dependent manner. We also performed a HPLC analysis to identify the flavonoid content of the *H. pamphylicum* extract and tested the identified flavonoids; luteolin, luteolin-4-glucoside, naringenin, helichrysinA and isoquercitrin, on DNA topoisomerase I activity. The measurement of the total antioxidant capacity of the flavonoid standards suggested that the topoisomerase inhibition might be correlated with the antioxidant capacity of the plant.

Key words: *Helichrysum pamphylicum*, DNA Topoisomerase