

Antiproliferative properties and antioxidant activity of various types of *Strobilanthes crispus* tea.

ABSTRACT

Regarding to the promising pharmacotherapeutic properties of *Strobilanthes crispus* (Acanthaceae) plant, we report here, the development of nutraceutical herbal tea from *S. crispus* young and old leaves and evaluate the potential antiproliferative properties and antioxidant activity in vitro. Unfermented and fermented tea (*Camellia sinensis*) preparation was applied for development of *S. crispus* tea. Antiproliferative properties of *S. crispus* tea extracts were determined by the microculture tetrazolium salt (MTT) assay against human breast cancer cell lines (hormone dependent, MCF-7, non-hormone dependent, MDA-MB-231). The results showed that *S. crispus* tea only inhibit the proliferation of human hormone dependent breast cancer cell lines (MCF-7) but not the non-hormone dependent breast cancer cell lines (MDA-MB-231). The antioxidant activity was determined using FRAP (Ferric Reducing/Antioxidant Power) and DPPH free radical scavenging assay. The results showed that the hot water extract of *S. crispus* tea showed high antioxidant activity especially *S. crispus* unfermented tea from old leaves. But the tea from the leaves of *C. sinensis* displayed better antioxidant activity.

Keyword: Antioxidant; Antiproliferative; DPPH free radical scavenging; FRAP; MTT; *Strobilanthes crispus*; Tea