



Antitumor, Antimicrobial Effect and Chemical Composition of the Essential Oil of *Croton polyandrus* Spreng.

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SUMMARY. The composition of the essential oil obtained from the dried flowering aerial parts of *Croton polyandrus* Spreng. was analyzed by GC and GC-MS. The antimicrobial activity of the essential oil was studied using the microdilution method and determination of minimal inhibitory concentration (MIC) value. *In vitro* antiproliferative activity was evaluated in ten human cancer cell lines and two non-tumor cell lines. Total growth inhibition (TGI) values were chosen to measure antiproliferative activity. Thirty-three components have been identified in the essential oil of *Croton polyandrus* Spreng. The major constituents of the essential oil were p-cymene (12.4 %), bornyl acetate (11.0 %) and ascaridole (6.4 %). The results obtained with *Croton polyandrus* Spreng. oil showed a moderate antifungal activity, with MIC equal the 64 µg/mL for all fungi strains and weak antibacterial activity; cytotoxic effect for most of the strains used were tested only at the highest concentration and showed no cytostatic effect.

KEY WORDS: Antibacterial activity, Antifungal activity, Antitumor activity, *Croton polyandrus*, Essential oil.

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