Antineoplastic activity of Copaifera multijuga oil and fractions against ascitic and solid Ehrlich tumor.
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Abstract
The aim of this study was to investigate the effect of chronic treatment with C. multijuga oil on Ehrlich tumor evolution. C. multijuga was fractionated in a KOH impregnated silica gel column chromatography to give three distinct fractions, i.e., hexanic, chloroformic, and methanolic, mainly composed by hydrocarbon sesquiterpenes, oxygenated sesquiterpenes and acidic diterpenes, respectively. Results demonstrated that the C. multijuga oil, the hexanic, and chloroformic fractions did not develop toxic effects. The oil, hexanic and chloroformic fractions (doses varying between 100 and 200mg/kg) showed antineoplastic properties against Ehrlich ascitic tumor (EAT) and solid tumor during 10 consecutive days of treatment inhibiting ascitic tumor cell number, reverting medulla and blood cell counts to values similar to control group, and inhibiting the increase on several inflammatory mediators (total protein, PGE(2), nitric oxide, and TNF) on ascitic fluid. The treatment also inhibited the increase in paw volume on tumor-inoculated mice. In conclusion, C. multijuga as well as its fractions demonstrated antineoplastic effect even after oral administration confirming its use by traditional medicine.
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