Effects of a ryanodane terpene, isolated from fruits of *Erithroxylum passerinum* on human glioblastoma cells.

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Some species of plants from the genus *Erithroxylum* are endemic to Brazil, mostly along the coast in Restinga forest. Ethnopharmacologic studies in the state of Bahia reported cases of intoxication in humans after consumption of fruits from *E. passerinum*, characterized by euphoria and nausea. This study investigated the effects of a terpene (AEP1 100-400 µg/mL), isolated from the fruits of *E. passerinum* on morphology and viability of GL-15 human glioblastoma cells. As determined by MTT and trypan blue exclusion tests AEP1 inhibited the metabolism and induced cell death of glioblastoma cells, since 24 h after treatment. Chromatin staining and ultrastructural analysis demonstrated that cells exposed to AEP1 presented abnormal ruffled and lobulated nucleus and also DNA fragmentation in Comet assay, characterizing apoptosis. Moreover, the majority of remaining adherent cells exposed to AEP1 presented morphological changes, characterized by a more condensed cell body with cellular process, as observed by immunocytochemistry for cytoskeleton proteins vimentin, α-tubulin and GFAP, and after staining of F-actin. These results indicate that terpene AEP1 interferes on biology of glioblastoma cells and may find therapeutic applications. Supported by CAPES, CNPq and FAPESB.

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