

EFFECT OF *Scorpaena plumieri* VENOM AND FRACTIONS ON MURINE GLIOBLASTOMA CELLS.

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Animal venoms are source of structural templates for development of new therapeutic agents against cancer. The aim of this work was to identify and characterize the antitumoral effect of *Scorpaena plumieri* venom (SP) and fractions on cultured murine glioblastoma cells. Glioblastoma cells were sensitive to SP in a dose-dependent way. Significant reduction in metabolism followed by morphological disturbs (rounded cell shape and reduction of the cytoplasmic volume) could be observed after treatment by SP. These cytotoxic effects were time and dose-dependent ($IC_{50} = 3,48\mu\text{g/mL}$). Inhibition of cell adhesion and proliferation could also be observed at concentrations higher than $10\mu\text{g/mL}$. Tests of metabolic viability with the fractions have shown that the FI, FII, FIV and FVI fractions were equally powerful, reducing the metabolism in 70% at concentration of $10\mu\text{g/mL}$. Theses fractions proved to have important kallikrein-like, edematogenic, hyaluronidase and caseinolytic activity, respectively. These results are an evidence of the worthy anticancer activity of SP and fractions, and morphological disturbs of cells treated with SP are suggestive of the apoptosis occurrence. Further studies are in development in order to characterize the antitumoral mechanisms of action of the SP venom and its components.

KEY WORDS: scorpionfish, venom, glioblastoma, cytotoxicity

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