

***In vitro* Antitumoral properties of *Bothrops alternatus* venom**

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Brain tumors are the second leading cause of death in children and also in young adults. Malignant glioma display a high degree of vascularity and invasion and remains largely incurable. Snakes venoms and polypeptides are shown to interfere with the growth of tumors cells. This work evaluated the antitumor effects of *Bothrops alternatus* venom (BAV) on murine glioblastoma cells. BAV effects on glioblastoma survival were determined during 72h incubation with different concentrations. BAV treatment evoked dose-dependent cytotoxic and antiproliferative effects on glioblastoma in a dose-dependent way. Morphological analysis of treated cells showed retraction of cytoplasmatic expansions, leading to rounded non-adherent cells. These cells suffered a gradual decline in proliferation and viability upon reculture. *Bothrops* venoms are known for their contents of important proteolytic activities involved in cell interactions with the extracellular matrix. In order to shed some light on the mechanisms of these effects we evaluated BAV proteolytic activity, identified by zymography (SDS-PAGE-Gelatin). *Bothrops alternatus* venom catalyzed the hydrolysis of gelatin with optimal pH around 7.2. Summing up the presence of gelatinolytic activity in BAV, the inhibitory effect on glioblastoma cell adhesion and proliferation lead us to think that a metalloprotease component from BAV should be involved in the antitumoral effect of BAV on malignant glioblastoma.