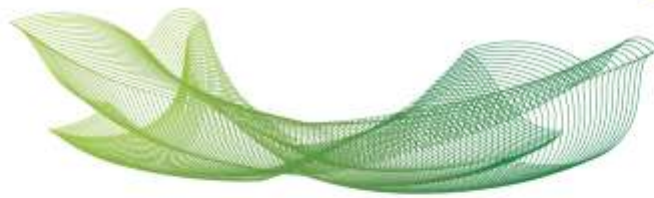




Tipo	Periódico
Título	Screening of Brazilian marine animals extracts on tumor cell line panel
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Resumo	<p>Introduction and Objectives: The marine environment is a good source of new molecules, few explored so far. Nevertheless, several compounds therapeutically relevant have been used in the treatment for chronic pain, arthritis, virus and tumor. Cancer is a disease caused by the disordered growth and differentiation of cells, that invade tissue and organs. High mortality has been attributed to the disease and few efficient and selective treatment are available. Thus, the search for new antitumor molecules is essential, and in this sense, the Brazilian biodiversity, especially the waters coast, can provide interesting new compounds. In this work, we have collected animals from São Sebastião (SP, Brazil) and their methanolic extracts were screened over a tumor cell panel. Material and Methods: Animals from Phylum Porifera (<i>Tedania brasiliensis</i> and <i>Zygomicala</i> sp.), Phylum Cnidaria e Class Anthozoa (<i>Carijoa riisei</i>, <i>Zoanthus sociatus</i> and <i>Exaiptasia pallida</i>) and Phylum Cnidaria e Class Hydrozoa (<i>Eudendrium carneum</i>), were collected manually in the intertidal zone. After collected, animals were washed with artificial sea water and then immersed in methanol containing 0.1% acetic acid. The content extracted was centrifugated and the supernatant was concentrated and diluted with sterile phosphate-buffered saline to be tested (1.6 to 100 mg/mL). Samples were incubated in cultured cells of glioblastoma (U251), breast (MCF-7), ovary (OVCAR-3), resistant ovary (NCI-ADR/RES), colorectal (HT-29), leukemia (K562) and non-tumor (HaCaT). After 48 hours, the cell viability was determined by MTT assay and the IC50 was calculated.</p>



Results and Discussion: *C. riisei* was effective in reducing the cell viability of U251 ($IC_{50} 52,9 \pm 3,2$ mg/mL), MCF-7 ($IC_{50} 93,2 \pm 11,9$ mg/mL) and OVCAR-3 ($91,9 \pm 29,5$ mg/mL). *T. brasiliensis* extract was able to reduce the U251 cell viability in an $IC_{50} 8,5 \pm 3,5$ mg/mL, while had no effect on other cell lines (including non-tumor). Other species did not cause any effects over cells. According to preliminary analysis by mass spectrometry, the extracts are composed by low molecular mass compounds (200 and 500 Da), and abundant ions are not related to described molecules. The results show interesting effects of some extracts on the reduction of tumor cell viability, with selective activity, which may be increased after the obtention of a purified molecule, the next step of this promising work.

Fomento