

Phytotoxicity and antiproliferative activity on tumor cells *in vitro* of plant extracts

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The interaction of plants with the environment and other organisms causes them to make compounds with diverse biological activities. These compounds are used as active ingredients for many applications. It is estimated that 85% of the world flora is still unexplored. Our goals are to identify plant extracts as source of active ingredients for agro and pharma industry. Therefore we evaluated the phytotoxic activity of plant extracts, as well as, their capacity to inhibit *in vitro* the proliferation of tumor cell lines. A total of 103 aqueous extracts were prepared from 62 plant species collected in Argentina. Germination assays were performed using all these extracts against two dicot and three monocot species. Four extracts were interesting because they significantly inhibited germination of these five species at 1 and 8 mg/mL. In addition, they showed pre- and post-emergence negative effect on plant growth at 1 mg/mL. On the other hand, four extracts showed anti-proliferative activity against the tumor cell line MDA-MB-231, from breast adenocarcinoma. Moreover, other four extracts were active against the H1299 line, from lung carcinoma. The proliferation inhibition was over than 50% when a dilution 1/2000 of each extract was applied. These results show promising possibilities for these samples and identification of the molecules responsible for the effects is in progress.