

## Detection of Antitumor Activity and Oxidative Stress in Mice Treated with Crude Extract of *Cordia Verbenaceae*

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*Cordia verbenacea* (Boraginaceae) is popularly used in Brazil to treat several diseases, including cancer. Many effective anticancer drugs work generating free radicals leading to apoptosis. This study aims to evaluate the oxidative effects and antitumor of a treatment with the hydroethanol crude extract (HCE) from *C. verbenaceae* on the Ehrlich ascites carcinoma (EAC). EAC was inoculated in isogenic Balb/c male mice (23.0±0.2g b.w., n=6) Intraperitoneal treatments with HCE (150mg/Kg/day) started on the second day and on tenth day the animals were sacrificed. DMSO 10% was use as negative control (NC). The ascitic fluid was collected and used for the analysis. Results were expressed by means and standard deviation and they were analyzed using one-way ANOVA and Tukey-Kramer test. The treatment caused decrease in viable cell count (NC: 0.008; HCE: 0.021, proportion unviable/viable cells) and life span increase (NC: 14.5; HCE: 16 days). The treatment also caused increased catalase (9.13±0.80 µmolmin/mg protein), glutamyl-S-transferase (3.40±0.82 µmol min/mg protein) and superoxide dismutase activities (3.00±0.40 USOD/mg) when compared to the NC (5.98±0.35, 2.48±0.21 µmolmin/mg protein and 0.71±0.08 USOD/mg protein respectively). No significant differences were observed for the levels of lipid peroxidation (HCE=0.89±0.14; NC=0.93±0.11 nmol/mg protein). Levels of GSH and protein oxidation in the tumor were increased (HCE=8.37±1.89; NC=6.49±0.67 mmol/mg protein and HCE=338.24±115.24; NC=33.75±8.81 µmol/mg protein, respectively). The results showed that HCE exhibited an antitumor potential because it was able to induce oxidative stress in the tumor fluid.