Abstract
This work describes an efficient micropropagation protocol for Verbena litoralis and the study of the antinociceptive and antioxidant activities in extracts of this species. For the establishment in vitro, surface-sterilization procedures and PVPP showed high efficiency in fungal-bacterial contamination and phenol oxidation controls. Nodal segments cultivation in MS medium supplemented with 6-benzyladenine (7.5 µM)/α-naphthaleneacetic acid (NAA; 0.005 µM) induced multiple shoots. Elongated shoots were rooted with IAA (0.2 µM). Acclimatization rates were elevated and the plants showed the typical features of this species. The hexanic fraction (HF) of powdered leaves presented a radical scavenging activity with IC50 = 169.3 µg mL-1. HF showed a non-dose dependent analgesic activity in the writhing test; its antinociceptive activity in the hot plate test was restricted to 500 mg kg-1, which is the highest dose. The results of this study showed the potential of tissue culture on conservation and large scale multiplication and confirmed the traditional folk medicine use of V. litoralis.

Keywords
Tissue culture, biodiversity conservation, biological effects, natural products.