MODULATION OXYGEN REACTIVE SPECIES IN CELLS SK HEP-1 EXPOSED TO HYDROETHANOLIC EXTRACT OF BACCHARIS TRIMERA (CARQUEJA)

Rabelo, A.C.S.¹; Araújo, G.R.²; Costa, D.C.³
¹,²,³ Department of Biochemistry, Institute of Physical and Biological Sciences, Federal University of Ouro Preto, Minas Gerais, Brazil.

Introduction and Objectives: Oxidative stress is characterized by an imbalance between the antioxidant defense and reactive oxygen species (ROS), resulting in a prevalence of ROS. This framework is responsible for a damage in the body, such as lipid peroxidation, alteration of protein structure, nucleic acids, carbohydrates, among others. In this context, antioxidants can be seen as an alternative to restore the balance oxidizer / reducer, and these are found in plants and food. In this sense, Baccharis trimera is a plant widely used by the population and has great potential antioxidant. Thus, the objective of this study was to evaluate the possible modulatory effect on ROS in cells of hepatocellular carcinoma SK Hep-1, exposed to hydroethanolic extract of B. trimera.

Materials and methods: SK Hep-1 cells were exposed to hydroethanolic extract of B. trimera at concentrations of 10, 25 and 50 mg mL⁻¹, at times of 30 minutes and 6 hours. For this test we used flow cytometry assay, where we used the marker for ROS (carboxy-H2DCFDA). It was also performed the exclusion test with trypan blue, to ensure the viability of the experiment. Results and discussion: In both time, 30 minutes and 6 hours, it was observed that the extract at concentrations of 25 and 50 mg mL⁻¹ were able to modulate the ROS. In addition, cell viability remained above 79% in all cases. Conclusion: The results suggest that hydroethanolic extract of B. trimera has an antioxidant potential in the prevention of oxidative stress.

Keywords: Baccharis trimera, hydroethanolic extract, oxidative stress.

Financial support: CAPES e FAPEMIG.