ANTIOXIDANT ACTIVITY in vivo AND in vitro OF AQUEOUS EXTRACT OF LEAVES FROM ERVA MATE (Ilex paraguariensis St. Hil.).

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Widely consumed in South America, the yerba-mate (Ilex paraguariensis A. St. Hil.) recently became known in scientific literature for its health benefits, as its hypocholesterolemic, hepatoprotective, diuretic, antithrombotic and mainly antioxidant properties. Antioxidants are substances which counteract free radicals and prevent the damage caused by them. The main goal of this work was to evaluate the in vitro and in vivo antioxidant activity of the aqueous mate extract. The aqueous mate extract (3 % w/v) was prepared with leaves which had been previously washed and dried. The evaluation of antioxidant activity in vitro was determined by using DPPH (2,2-diphenyl-1-picrylhydrazyl) and the antioxidant activity in vivo was carried out using the yeast Saccharomyces cerevisiae strain XV185-14c. The aqueous mate extract showed antioxidant activity in vitro of 129.79 ± 4.12 µg/mL (EC50), and showed high potential for protection against oxidation of yeast (86.65 ± 5.65 %). The antioxidant activity of Ilex paraguariensis is related to the presence of several compounds, such as phenols, carotenoids, tannins, vitamin E, and chlorophyll. Inhibition of in vitro colon cancer proliferation and reduction of abdominal fat are some beneficial effects attributed to the potent antioxidant properties in mate.