Effects of the Supplementation of Açaí Pulp in Antioxidant Enzymes of Rats Treated with Hypercholesterolemic Diet

Abreu, I.C.M.E.,1 Figueiredo, B.B.,1 Souza, M.O.,2 Teixeira, K.R.,1 Silva, M.,2 Silva, M.E.,1,3 Pedrosa, M.L.,2,3

1Escola de Nutrição, 2Dep de Ciências Biológicas, 3Núcleo de Pesquisas em Ciências Biológicas (NUPEB); Universidade Federal de Ouro Preto (UFOP), Ouro Preto, MG

Hypercholesterolemic diet induces oxidative stress. To prevent oxidative stress the antioxidant defenses must be working effectively. The açaí pulp is considered a great source of antioxidants due to their total anthocyanin and total phenolic compounds content. The antioxidant activity of phenolic compounds is related to its ability to neutralize reactive species directly, through the transference of hydrogen atoms and indirectly, through the activation of antioxidant defense systems. Thus, the aim of this study was to evaluate the effects of the supplementation of açaí pulp in antioxidants enzymes in the liver tissue of rats treated with hypercholesterolemic diet. Female rats were divided into four groups: Control (C), which received a standard AIN 93 diet; Control Açaí (CA), received a diet AIN 93 diet with 2% of supplementation açaí pulp; Hypercholesterolemic (H), composed of animals that received a hypercholesterolemic diet with 25% of soybean oil and 1% cholesterol; and Hypercholesterolemic Açaí (HA) composed of hypercholesterolemic animals that received a diet with 2% of supplementation açaí pulp. Açaí can’t promote change in total glutathione concentration, but induced a reduction of the activity of superoxide dismutase and catalase in the HA group compared to the group H. The C and CA groups were similar in the three enzymes evaluation. The results suggest that açaí may neutralize reactive species directly reducing the necessity for increase antioxidant enzymes.

Word Keys: Açaí, antioxidants defense, oxidative stress, hypercholesterolemia, rats.
Supported by: CAPES, CNPQ, REUNI-UFO.

Supported by: CAPES, CNPQ, REUNI-UFO.