EFFECT OF TREATMENT WITH *Ilex paraguariensis* EXTRACTS IN MARKERS ON LIVER OF MICE

Lima, M.E. 1; Pires, M.2; Salgueiro, A.C.F.1; Rosa, H.S.1; Folmer, V.1,2

1Programa de Pós-graduação em Bioquímica, UNIPAMPA, RS, Brazil; 2Laboratório de Bioquímica e Toxicologia de Produtos Naturais e Sintéticos, UNIPAMPA, RS, Brazil

**Introduction:** Recent evidences reported that oxidative stress plays an important role in the pathogenesis of diabetes, types 1 and 2, accelerating the development of diabetic complications. The search for antioxidant compounds that exert activity on oxidative stress biomarkers is crescent. The *Ilex paraguariensis* has antioxidant properties that have been described in many biological models.

**Objective:** This study aims to investigate the effects of treatment with yerba mate extract in mice with type 1 diabetes.

**Materials and Methods:** In this study swiss male mice were used, with 2 months old. Yerba mate extracts were prepared mimicking the way the mate is consumed, and were administered to the animals for 60 days by gavage. After treatment the animals were euthanized and were performed analyses of SOD, catalase and ALA-D activity in the liver.

**Results:** Treatment with yerba mate extracts reduced the blood glucose of diabetic animals. Moreover, increase activity of catalase, SOD and ALA-D in the liver of healthy mice, but this effect was not observed in diabetic mice.

**Discussion:** Extracts of mate, as described in the literature have antioxidant effects, as in this study, where there was an increase of enzymes activity, in healthy mice.

**Conclusion:** We believe that the extracts can develop effects beneficial in reducing oxidative stress in mice with type 1 diabetes, moreover, an experimental adaptation is needed, including a longer-lasting treatment, to be able to make up to the injury caused by the disease.

**Key Words:** Diabetes, antioxidant, *Ilex paraguariensis*