Evaluation of oxidative status after acute exposure of rats to the crude extract of *Salvia officinalis* L.

WEBER, T.B.¹, FIORENTIN, T.R.¹, ROSSET, A.¹, MELLO, M.B.¹, LOSS, C.G.¹, ROMAN, S.S.¹, MACEDO, S.M.D.¹

¹ Universidade Regional Integrada do Alto Uruguai e das Missões – Campus de Erechim

**Key words:** rats; Salvia officinalis; oxidative status

**Introduction:** *Salvia officinalis* L. enjoys the reputation of being a panacea because of its wide range of medicinal effects: it has been used as an spasmolytic, antiseptic and anti-inflammatory and in the treatment of mental and nervous conditions. Sage is one of the favourite candidate species as a source of natural antioxidants in health care products (LIMA, Tox. in vitro, 18, 2004).

**Experimental:** Forty rats were divided in control group (distilled water, orally) and experimental groups (25, 50 and 100 µg/kg of *Salvia* extracts, orally). The administration was made acutely. The animals were euthanized by CO₂ inhalation, and the blood, liver, kidney, brain, spleen and lung were collected for further biochemical analysis (ALA-D, TBARS and Protein Carbonyls). Data were statistically analyzed by ANOVA, and significant difference (p<0.05) between the groups established by the Duncan test.

**Results/Discussion:** Carbonyl protein level were shown significantly reduced in the rats blood in the dose of 25 µg/kg, suggesting antioxidant extract action. The increase at these levels in the liver and lung indicated that possibly at 100µg/kg dose the extract presented toxic action. In the brain, the increase of carbonyl protein levels was justified by the sensitivity of the organ. The enzyme ALA-D concentration was reduced in the animal's brain at 100µg/kg dose. This result corroborates the earlier carbonyl reduction, suggesting antioxidant action. In the measurement of lipid peroxidation (TBARS) the levels were shown decreased in the spleen, brain and lung, indicating a decrease of deleterious processes involving free radicals.

**Conclusion:** The results suggesting that the extract may have antioxidant activity by reducing the amount of carbonyls protein and ALA-D activity at the doses proposed. The preliminary results, shows that is possible to use of *Salvia* for the treatment of neurodegenerative diseases such as Parkinson’s and Alzheimer’s diseases.

**Support:** CNPq