Gallocatechin–Rich Extract of *Musa Cavendish* Prevents Oxidative Stress in Acute Wound Healing Process

Pereira, A.[1], Vieira, A. C.[1], Rosso, S.R. [2], Ferreira, S.R.S.[2], Pedrosa, R. C.[1]
[1]Depto. de Bioquímica; [2]Depto. de Eng. Química e Eng. de Alimentos,
Universidade Federal de Santa Catarina, Santa Catarina, Brazil.

Antioxidant compounds have been isolated from different natural sources and do an important role in diseases prevention and cure. Between these compounds is gallocatechin. This flavonoid was isolated from *Musa cavendish* peel by Someya et al (2002), who characterized its strong antioxidant potential against lipid peroxidation. The aim of this study was evaluate antioxidant profile of Gallocatechin–rich extract of *Musa cavendish* peel (GE) in wound healing process. Balb/c mice (weight 20±2g, n=6) were cutaneous injured and were divided in treated group (TG) which received topically GE (400mg/Kg/day) during 3, 6 ,9, 12 and 15 days and control group (CG) which did not received treatment. Antioxidant profile was evaluated. Results were statistically significant when compared with CG: GSH content increased only on day 12 (TG: 2.14±0.36; CG: 0.63±0.2 µmol.mg protein^{-1}); lipid peroxidation was reduced on days 3, 6, 12 and 15 (TG: 85.98±4.27, 84.68±5.83, 78.82±9.54, 71.35±6.89; CG: 304.9±55.82, 187.31±54.64, 173.76±63.59, 244.52±43.41 nmol.mg protein^{-1}, respectively); carbonyl protein level was reduced on days 3 to 9 (TG: 0.073±0.05, 0.031±0.03, 0.22±0.01; CG: 0.61±0.02, 0.31±0.01, 5.67±1.86 nmol.mg protein^{-1}, respectively); CAT activity was reduced on days 3 to 15 (TG: 0.5±0.05, 0.35±0.03, 0.75±0.03, 0.77±0.1, 0.25±0.01; CG: 1.63±0.26, 1.61±0.29, 1.31±0.42, 1.76±0.16, 5.86±1.82 mmol.min^{-1}.mg protein^{-1}, respectively); GPx activity was reduced on days 3 to 15 (TG: 0.94±0.08, 1.06±0.04, 0.40±0.05, 0.33±0.06, 0.29±0.02; CG: 8.41±0.02, 8.32±0.06, 8.78±1.54, 9.97±1.49, 9.67±1.75 µmol.min^{-1}.mg protein^{-1}). The results obtained suggest that GE decrease oxidative stress in wound healing process. It may be associated with gallocatechin content present in this banana specie.

Key words: gallocatechin, *Musa cavendish,* antioxidant profile