IN VITRO SAFETY PROFILE OF *EUTERPE OLERACEA* MART. AND *RANDIA FEROX* EXTRACTS IN HUMAN KERATINOCYTES

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INTRODUCTION: Natural health products (NHP) such as açaí (*Euterpe Oleracea* Mart) and limoeiro-do-mato (*Randia ferox*) have biological potentials, acting as antioxidants and anti-inflammatory agents, for example. Thus, the use of these NHP has been explored in the scientific field as a potential therapeutic alternative for skin wound healing. Açaí and imoeiro-do-mato are commonly used by the general population in Brazil due to their possible healing properties. However, there is a lack in terms of the safety profile of these agents. OBJECTIVE: The objective of this study was to evaluate the *in vitro* safety profile of açaí and limoeiro-do-mato extracts in human keratinocytes. MATERIALS AND METHODS: HaCat cells (human keratinocytes) were cultured using DMEM medium and treated with açaí (0.001-1000 µg/mL) or limoeiro-do-mato (25-400 µg/mL) extracts during 24, 48 and 72h. Then, these cells were evaluated for cellular viability and proliferation indexes, production of nitric oxide (NO) and total levels of reactive oxygen species (ROS). RESULTS: Only the highest concentration of açaí extract showed a potential cytotoxic effect, decreasing in cellular viability and proliferation compared to untreated cells. An increase in NO production was also observed at the highest concentration at all three time points under açaí exposure, while there was no significant increase in ROS at any concentration, which was consistent with the NC. Interestingly, limoeiro-do-mato extract, did not cause any alteration in the cells, keeping cellular viability, NO production and ROS levels similarly to the negative control group. CONCLUSION: The obtained results demonstrate that açaí and limoeiro-do-mato extracts present a very consistent and favorable in vitro safety profile at most of the tested concentrations, proving to be safe for human keratinocytes. Thus, these NHP may be used for future tests aiming to prove their healing effect potential.

Keywords: Cytotoxicity, Natural Health Product, Healing.