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Cytotoxicity, phototoxicity and genotoxicity evaluation of sucupira oil: a potential new cosmetic ingredient

M. T. Uemura^{1,2}, *E. A. Ostroky*³, *M. B. Mathor*²,
*N. Andreo-Filho*¹, *T. M. Kaneko*⁴, *D. P. Luco*², *M. T. F. Bara*⁵,
*J. R. Paula*⁵ and *P. S. Lopes*¹

¹DECT, UNIFESP, Diadema, Brazil; ²CTR, IPEN, Sao Paulo,

Brazil; ³Faculty of Pharmacy, UFRN, Natal, Brazil; ⁴Faculty of Pharmaceutical Sciences, USP, Sao Paulo, Brazil; ⁵Faculty of Pharmacy, UFG, Goiania, Brazil

marcellytochimi@hotmail.com

Pterodon emarginatus Vogel is easily founded at Brazilian savanna and presents anti-inflammatory and analgesic proprieties (Dutra et al., 2008). Due to the presence of diterpenes and flavonoids, it could be used as permeation enhancer or antioxidant ingredient. The goal of this study was evaluate the cytotoxicity, phototoxicity and genotoxicity of sucupira oil in order to verify the potential use of this herbal product as cosmetic ingredient in antioxidant skin formulation. The study was conducted in Balb/c 3T3 cells, for cytotoxicity and phototoxicity assays or CHO-K1 cells for genotoxicity test, both of them at 2×10^4 cell/well, and was performed using several sucupira oil concentrations (1600 to $12.5 \mu\text{g} \cdot \text{ml}^{-1}$) dissolved in propylene glycol: water. The viable cells were measured by MTS method and quantified at 490 nm . The genotoxicity assay was performed using the OECD 487 (2010). The results showed that the $500 \mu\text{g} \cdot \text{ml}^{-1}$ concentration is safe. The solvent also showed no toxicity at the same concentration. These tests provide the ability to predict *in vitro* the toxicity potential of new ingredients in the early stage of products development and could be used for screening purposes preventing the use of animal cosmetics products.

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