Inhibition of Melanogenesis, Antioxidant Activity and Evaluate the Cytotoxicity of Extracts from *Passiflora nitida* Kunth

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Introduction: The *Passiflora nitida (P. nitida)* Kunth is a species of the genus Passiflora. In its leaves are presents phenols and flavonoids, which are responsible for antioxidant activity. Thus, has a great biotechnological potential. Tests were performed to evaluate cytotoxicity and capacity reduction of melanogenesis by Dry Extract of *P. nitida* (DEPN). **Objectives:** The study of Reduction Potential of *P.nitida*, evaluate the cytotoxicity and the stimulation of melanogenesis are the aims of this work. **Material and Methods:** Reducing Potential of Dry Extract *P.nitida* 7.5% (DEPN) a sample was mixed with phosphate buffer and potassium ferricyanide. The mixture was incubated and then added trichloroacetic acid, centrifuged. The supernatant was mixed with distilled water and ferric chloride. Cytotoxicity by the Alamar Blue assay was performed using resazurin, a fluorescent indicator with redox properties, as occurs with the tetrazolium salt, is reduced in proliferating cells. Cell suspension were used for the measurement of melanin. The absorbance of melanin solutions obtained were measured using an ELISA plate reader. **Results and Discussion:** For reducing potential, the result shows that the reducing potential exists DEPN 7.5, but is dose-dependent because the best results were for the highest concentrations. The study of cultured cells assessed the cytotoxic potential of DEPN 7.5% in B16F10 cell culture. The result indicates that after 72 hours, up to a concentration of 100 ug/ml, both did not cause cytotoxicity. Finally, it follows that inhibition of melanogenesis can be achieved by antioxidants or tyrosinase inhibitors. **Conclusions:** It is possible to conclude that *P. Nitida* and DEPN has a good reduction activity of melanogenesis and without harming the cells. This activity may be associated with its antioxidant activity, but to define the real mechanism of action the further studies for confirmation is necessary.

Keywords: *Passiflora nitida* Kunth; Antioxidant; Inhibition of melanogenesis; cytotoxicity.

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