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Antiproliferative efficacy of photodynamic therapy with fractions and isolated compounds of *Sinningia magnifica* (Gesneriaceae)

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The *Sinningia magnifica* belong to Gesneriaceae family what comprises around 150 genera, distributed around the world. Phytochemical studies with *Sinningia* reported the identification of phenolic glycosides, anthocyanins and anthraquinones with biological properties (Scharf et al., 2016). The Photodynamic chemotherapy (PDT) has been used for many purposes, such as antitumor, performing as a non-invasive therapy with minimal side effects using photosensitizers that, under illumination at a certain wavelength and in the presence of oxygen, produce reactive oxygen species, cytotoxic to the target cells (Brown et al., 2004; Andreazza et al., 2015). In this initial work, was made a chromatographic fractionation using silica as stationary phase by flash column, open column and thin layer chromatography of an ethanolic extract of *S. magnifica* prepared by maceration of its tubers. This fractions and isolated compounds of our research group was used to an investigation of the potential for employment as natural photosensitizer against human prostate cell line (PC-3) and a control cell line (3T3). Also, was determined the absorption profile of isolated compounds in the visible region, and the 1,3-DPBF decay, as an indirect method of singlet oxygen generation, of the best compounds. The antiproliferative activity was assessed by the reduction of a tetrazolium salt (MTT), carried out in triplicate, using an irradiated plate and a non-irradiated plate in sub-inhibitory concentration. The irradiated plate reduced the cell viability comparing with non-irradiated plate. Despite the positive results, further investigations are necessary to confirm the potential of this technique and the bioactive compounds as PDT agent.

Biography

Alessandra Serain is a currently a Pharmacist from the State University of Campinas and a PhD candidate with FAPESP scholarship, in the Biosciences and Technology Program of Bioactive Products of the DBV / IB - UNICAMP with the research project that seeks to perform a phytochemical study of two species of *Sinningia* for application in Photodynamic Therapy (PDT) in Culture of human cells, and biotechnological study of plant cell culture. Has experience of Scientific Initiation at BTPB-UNICAMP, 18 months with FAPESP scholarship, in the field of phytochemistry, PDT, essential oils and microbiological activity.

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