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In vitro and *in vivo* antitumor activity of crude extracts and anthraquinones derivatives of *Vatairea paraensis* Ducke wood

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The wood of several tropical trees species with abundant secondary compounds present in their extractives, demonstrate potential for phytochemical and pharmacological studies searching natural products with industrial interest; due its potential as a source of bioactive compounds composites. *Vatairea paraensis* is one of those species, presenting a high content of extract in the wood. The crudes extracts (polar and polar) and ten different fractions obtained from crude polar extract were tested *in vitro*, an anticancer drug screen utilizing a panel of 7 human tumor cell lines organized into subpanels, representing melanoma and cancers of the lung, colon, kidney, ovary and breast. The fraction named F6 obtained a TGI (total grown inhibition) varying from 11.04% (ovary) to 214.44% (prostate) and based on those results it was selected for phytochemical isolation and for *in vivo* hollow fiber assay. HPLC techniques and GC/MS enabled to identify presence of 3-methyl-1, 8, 9-antracenetriol or crisobarin which was confirmed by NMR. In hollow fiber assay, the fibers with OVCAR-03 line were introduced into the peritoneum and subcutaneous of BALB/C mice anesthetized with CO₂. The treatments, saline (10 mL/kg), doxorubicin (3 mg/kg), F6 (at doses of 3, 5 and 7 mg/kg) were administered intraperitoneally for 21 days. The results demonstrate the potential antitumor activity of the *V. paraensis* F6 fraction for hormone dependent tumor with an estimated low toxicity, since no animals died. This allows inferring that the search of new chemical compounds could be a tool contributing to rational use and management of the Brazilian rainforest.

Biography

Luciana Jankowsky was graduated in Pharmacy from the Methodist University of Piracicaba, and specialization in Clinical Pharmacology at Methodist University of Piracicaba and Master's degree in Cell Biology and Structure at State University of Campinas. She integrates a research group at the Multidisciplinary Center for Chemical, Biological and Agricultural Research. She has experience in the area of Research and Development Cosmetic and Clinical Research, through development of research protocols and preparation of relevant documentation to drug registration Affairs Regulatory, cosmetics and supplies. Currently she is a graduate student in Wood Technology, at ESALQ, USP with a focus on pyrolysis and its products in the areas of preservatives for cosmetics and cleaning products, by techniques of gas and liquid chromatography, high-performance, coupled to mass spectrometry.

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