Oliveira P F et al., J Clin Toxicol 2014, 4:4
http://dx.doi.org/10.4172/2161-0495.S1.013

OMICS Group Conferences
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3rd International Summit on
Toxicology & Applied Pharmacology
October 20-22, 2014 DoubleTree by Hilton Hotel Chicago-North Shore, USA

Analysis of *in vitro* antitumor activities of *Styrax camporum* extract and its chemical markers, egonol and homoegonol

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The *Styrax camporum* is commonly found in Brazil and known mainly as "benjoeiro". It is widely used for the treatment of gastrointestinal disorders especially with its regard to antiulcerative potential. The benzofuran lignans, egonol and homoegonol are found in all species of the genus Styrax, being considered chemical markers of genus. Considering that natural products are some of the important sources of new anticancer drugs, this study evaluated the cytotoxic activity of *S. camporum* hydroalcoholic extract (SC) and their chemical markers, egonol (EG) and homoegonol (HE), against different tumor cell lines: Murine melanoma (B16F10), human breast adenocarcinoma (MCF-7), human cervical adenocarcinoma (HeLa), human hepatocellular liver carcinoma (HepG2) and human glioblastoma (MO59J). A normal human cell line (lung fibroblasts; GM07492A) was included. The cytotoxic activity was evaluated at different times of treatments, 24 h, 48 h and 72 h, using the XTT assay and results were expressed in IC50. The results demonstrated that all natural products testedwere more cytotoxic for tumor cells at 72 h treatment. The more pronounced cytotoxic activity was observed for EG plus HE, with IC_{50} values ranging from 13.3 to 62.2 µg/mL. The lowest IC_{50} values were observed for the HeLa cells, these being 9.1 µg/mL for SC and 11.2 µg/mL for EG. Thus, SC, EG and HE demonstrated cytotoxic activity against tumor cell lines tested, and it was more effective against HeLa cell line.

Biography

Oliveira P F obtained her Master's degree from University of Franca, São Paulo, Brazil, at age of 23. She is currently pursuing her PhD at the same institution. Her area of expertise is genetic toxicology, cancer chemoprevention and anti-tumoral activity models.

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