Rodolfo Abarca-Vargas et al., Clin Exp Pharmacol 2016, 6:2 (Suppl)
http://dx.doi.org/10.4172/2161-1459.C1.011

Effect of extraction conditions on total phenols contents and flavonoids, and cytotoxic activity of *Bougainvillea xbuttiana*

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Natural products used by folklore traditions for treating several diseases represent a source of chemical entities for the determination of pure compounds or as standardized extracts, provide unlimited opportunities for new drug leads because of the unmatched availability of chemical diversity. *Bougainvillea xbuttianais* is extensively used in Mexican traditional medicine to treat several diseases including painful disorders. This study was aimed to determine the effect of extraction conditions on cytotoxic activity and the concentration of total phenols content and flavonoids from B. *xbuttiana*. Extraction solvents: ethanol (50 to 100%, v/v), methanol, acetone, ethyl acetate and dichloromethane (100%) and extraction temperatures (26, 45 and 64°C) were used. Results showed that the highest yield was observed in the extraction with methanol 100%, the maximum amounts of the total phenol content was obtained in extraction with ethanol 100%, while the greater amounts of flavonoids were obtained in the extraction with dichloromethane 100%. In all extractions with solvents; methanol, acetone, ethyl acetate and dichloromethane show the percentage cytotoxicity between 35 to 50%. The ethanolic extraction no cytotoxic effect is observed. For ethanol extractions the higher yields were found with 70% ethanol at temperatures 26 and 45°C. The maximum concentration of total phenol content were observed in extraction with ethanol 60, 70, 80 and 90% at a temperature of 64°C. While the highest flavonoids concentration was observed in extraction with 50% ethanol at 26°C. Extract yield, chemical composition (total phenol content and flavonoids) and cytotoxic activity varied with the extraction process as well as solvent composition.

Biography

Rodolfo Abarca-Vargas, completed his Doctoral studies at the Autonomous Metropolitan University, and is currently pursuing a Post-doctoral fellow at Post-doctoral Medicine at the Laboratory of Inflammation and Toxicology, Faculty of Medicine of the University Autonomous of Estateof Morelos. He has published three articles in prestigious journals and has participated in international conferences.

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