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In vitro cytotoxic potential of Yacon (*Smallanthus sonchifolius*) against HT-29, MCF-7 and HDFn cell lines

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Yacon (*Smallanthus sonchifolius*) tubers and leaves have been used widely as foodstuff and as remedy for urinary ailments, muscle pain, hyperlipidemia and diabetes mellitus. Recent studies have investigated on isolating active components for their anti-cancer potential against melanoma, cervical cancer and colon cancer. In this study, the cytotoxicity potential of hexane, methanol and DCM extracts of Yacon leaves was assessed against MCF-7 (breast cancer), HT-29 (colon cancer) and HDFn (normal human dermal fibroblast) cell lines by using AlamarBlue assay. Results showed significant reduction in cellular viability of MCF-7 cell lines caused by hexane, methanol and DCM extracts in a dose dependent manner, with DCM being the most potent. The DCM extract also produced significant cytotoxic activity against HT-29 cells, with IC₅₀ lower than 5-fluorouracil. Effect on HDFn showed that three Yacon extracts produced significantly lower cytotoxicity compared to drug controls with the DCM extract showing the least toxicity. These results are very promising for discovering anti-cancer molecules in Yacon leaves

Biography

Rachelle P Mendoza has completed her Bachelor of Science in Pharmacy at the age of 22 from University of the Philippines, College of Pharmacy, and her Doctor of Medicine at the age of 27 from De La Salle Health Sciences Institute, College of Medicine. She is currently the Associate Director of the Center for Biopharmaceutical Research, and has served as principal investigator of several bioavailability and Phase 1 clinical trials. She is also an Assistant Professor in the College of Medicine of De La Salle Health Sciences Institute, Department of Microbiology and Parasitology, where she is also involved in several on-going basic science research.

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