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Chemical profile and inhibition of tumor cell growth of the anthocyanins of Roselle hibiscus (*Hibiscus sabdariffa* L.)

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There are more than 300 species of hibiscus plants in the world. Roselle hibiscus is the only one species that has its calyces developed into a succulent part of the mature fruit. Previous research has shown Roselle hibiscus extracts to exhibit nutraceutical properties and the plant has been recognized in Africa, Mexico, India and China as folk medicine to treat a wide variety of ailments such as hypertension, pyrexia, liver disorder and inflammation. It is believed that these activities are contributed by the high content of anthocyanins present in the calyce extracts. The anthocyanin profile of the extract was associated with the degree of color pigmentation of the calyces. This study was conducted to evaluate the concentrations of anthocyanin-enriched fractions of methanolic extract from dark-red calyce Roselle accession. The MTT assay showed a dose dependent decrease in cell proliferation after exposure to the anthocyanin-enriched fraction for all cell lines. This was supported by the preliminary evaluation of apoptosis using crude extract that enhanced apoptosis. The enhance apoptosis accounted for at least part of the reduction by Roselle extracts.

Biography

Kit L Chin has received his PhD degree in Horticulture from Louisiana State University, USA. He has extensive research experience and expertise in sustainable agriculture research. He was a Member of the Agribusiness in Sustainable Natural African Plant Products (ASNAPP), a value chain development organization that promotes African indigenous natural products. He currently serves as a Project Team Leader in evaluating specialty crops with medical properties for small farm adoption. He has extensive collaborative research experience with West Virginia State University and Rutgers University on phytochemistry, antioxidant capacity and anti-tumor properties of Roselle plant and edible mushroom. He has published several papers on phytochemistry and bioactivities of Roselle plants.

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