

## **Cytotoxicity assessment of Ceri Terengganu and Kuini extracts against cancer cell lines**

***Nurhazwani S<sup>1</sup>, Hadijah H<sup>1</sup>, Tun Norbrillinda M<sup>1</sup>, Aishah MR<sup>1</sup>, and Mohd Shukri MA<sup>2</sup>***

*<sup>1</sup>Food Science Technology Research Centre, MARDI, 43400 Serdang, Malaysia; <sup>2</sup>Horticulture Research Centre, MARDI, Serdang, Malaysia*

Nowadays, food and natural ingredients have been connected to specific health benefits, from prevention of particular cancers to reduction of blood cholesterol and new branded food products with explicit health claims have also been introduced in the market. Ceri Terengganu (*Lepisanthes fruticosa*) and Kuini (*Mangifera odorata*) are some of the indigenous fruits available in Malaysia, known as *Buah Nadir*. Though these fruits are known to be a non-seasonal fruit species which produce fruits throughout the year, yet they are still underutilised. Preliminary studies showed that these fruits have gained attention due to its high antioxidant value. The objective of the study is to access the potential of these fruits extract on cell lines (normal and cancer cell lines) by using MTT assay. Results evaluated from these four extracts (by methanol extraction) revealed that these extract does not inhibit the growth of normal cell line used in this study (MRC5, VERO and 3T3), but affecting the growth of selected cancer cell lines. Extract of kuini kernel demonstrated a promising result on HepG2, MCF-7 and CRL1739 cell lines, where the IC<sub>50</sub> are 18.5 µg/ml, 22.5 µg/ml and 22 µg/ml, respectively. Whereas immature ceri Terengganu extracts showed cell growth inhibition on HepG2 and MCF-7 cell lines with IC<sub>50</sub> 37.5 µg/ml and 27.5 µg/ml, respectively. From this cytotoxicity assessment, it was proven that some part of these fruit have a potential anticancer activities against selected cancer cell lines. Exploring the molecular mechanism underlying the *in vitro* anticancer effects of these extracts on cancer cell lines would be an interesting adventure as we are currently moving towards the discovery and development of nutraceuticals and functional foods era.