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**Amino and fatty acid compositions in haruan traditional extract**Che Ku DAHLAN-DAUD<sup>1</sup>, Abdul M MAT JAIS<sup>1</sup>, Zuraini AHMAD<sup>1</sup>, Abdah MD AKIM<sup>1</sup>, Aishah ADAM<sup>2</sup><sup>1</sup>. Dept. Biomed Sci, Faculty Med and Health Sci, Universiti Putra Malaysia, 43400 UPM Serdang, Selangor; <sup>2</sup>Dept Pharmaceutical Sci, Faculty of Pharmacy, UiTM, 40450 Shah Alam, Selangor

Evaluation of amino and fatty acids compositions in Haruan Traditional Extracts (HTE) was done using HPLC and GC methods. The HTE contained at least 17 amino acids with glutamic acid, glycine, leusine, aspartic acid, proline, alanine and arginine are the most, with values 1.87 - 43.1293 mg/g, 21.80 - 80.85 mg/g, 7.85 - 40.19 mg/g, 13.85 - 44.07 mg/g, 9.4861 - 45.46 mg/g, 11.38 - 35.25 mg/g and 5.99 - 21.79 mg/g, respectively. Meanwhile, the highest percentage of fatty acids is palmitic acid; 3.54 - 26.84 % of total protein. The others major fatty acids are stearic acid, oleic acid and linoleic acid with values 3.25 - 15.90 %, 1.40 - 27.68 %, 0.51 - 7.82 % of total protein, respectively. HTE also found to have 4 extra bioactive compounds labelled as 1 to 4 on chromatographic tracing which in line with previously finding. It is concluded that the HTE is containing all the important amino acids plus some fatty acids, which is the basis to conduct antioxidant composition in both fresh Haruan and the HTE which was claimed to have wound healing properties. Comparative study was also carried out in various other extraction protocols, including commercial product.

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**Study of antihyperglycaemic properties of selected Malaysian antidiabetic plants in cultured 3T3-L1 cells***Nuraniza AZAHARI, Muhammad M A K KHATTAK, Muhammad TAHER, Solachuddin JA ICHWAN Nutrition Sciences, Kulliyah of Allied Health Sciences, IIUM, Kuantan 25200, Pahang*

Diabetes Mellitus is a metabolic disease occurring worldwide caused by defects in insulin secretion, insulin action, or most commonly both. Diabetes mellitus is probably the fastest growing metabolic disease in the world and as knowledge of the heterogeneous nature of the disease increases so does the need for more challenging and appropriate therapies. The aim of the research is to evaluate the antidiabetic properties of selected antidiabetic plants used in the treatment of diabetes mellitus. The selection of plants was based on traditional reputation of usefulness in treating diabetes. Water extracts of *Syzygium Polyanthum*, *Peronema Canescens*, *Orthosiphon Stamineus*, *Lagerstroemia Speciosa*, *Momordica Charantia*, *Tinospora Crispa*, *Archidendrau Jiringa*, *Cinnamomum Zeylanicum*, and *Andrographis Paniculata* were selected. Insulin was used as a positive control. The plants were studied on the bioactive peptides (adipokines) using an in-vitro model. 3T3-L1 adipocyte cell line is selected for this study because it plays an important role in lipid storage and glucose homeostasis. The first test is to know the ability of the plants to induce preadipocyte to adipocyte cell by using the mixture of dexamethasone, 1-isobutyl-3-methylxanthine and the plant extracts. Then, continue with the MTT assay to study the toxicity level in order to get appropriate dose of the extracts. After that, protein analysis is conducted to demonstrate the plant activity that mimics insulin action. Adipogenesis, adipolysis, adiponectin and leptin protein were analyzed to assess the effect of the extract on lipid synthesis and degradation in the cultured 3T3-L1 cells by using ELISA kit. The result confirms that a preadipocyte cell was differentiated to adipocyte. Preliminary result shows that *A. Paniculata* and *L. Speciosa* extracts have strong activity in inducing lipid formation.