

Accolades for UMS anti-cancer research at FAPA

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KOTA KINABALU: Four Universiti Malaysia Sabah (UMS) researchers made great impression with their anti-cancer research papers at the 25th Federation of Asian Pharmaceutical Associations Congress (FAPA) successfully held here at the Magellan Sutura Harbour Resort from October 9 to 12, 2014.

Angelina Cheng Ying Fang, Cheong Bo Eng and Teoh Peik Lin of the Biotechnology Research Institute of Universiti Malaysia Sabah with their research paper 'Isolation and Characterisation of Anti-Cancer Compounds from Acanthaceae Medicinal Plants', and so did Monica Liau, Cheong Bo Eng and Teoh Peik Lin with their presentation 'The Potential of *Phyla nodiflora* as Chemopreventive Agent in Human Breast Cancer Cell Line, MCF-7'.

According to the World Health Organization, 80 per cent of the total population depends on traditional medicine, and 85 per cent of medicines used nowadays are derived from plants.

Phyla nodiflora is a common plant in the warmer areas of East Asia from China to Australia to the Americas, where it grows along stream banks and in grassy places at elevations of 300 to 2300 metres.

Currently there are a lot of research focuses on finding of new chemopreven-

tive agents against cancer from such natural sources.

Breast cancer is the most common cancer in women of both developed and developing countries and the leading cause of cancer deaths among women, accounting for more than half a million deaths in 2012 with over 5,000 new cases in Malaysia.

To examine whether *Phyla nodiflora* plant extracts prevent the proliferation of MCF-7 cell line, MTT assay was performed by the researchers. Findings indicated the occurrence of DNA fragmentation upon treatment which was promising as breast cancer is one of the most prominent diseases that cause major death in women.

In this study, the ability of *Phyla nodiflora* to be used as chemopreventive agents from natural sources was investigated.

"*Phyla nodiflora* extracts were obtained from different parts of the plant such as leave, root, fruit and stem through soxhlet extraction and liquid-liquid partition using five different solvents such as methanol, ethyl acetate, chloroform, distilled water and hexane.

"Results showed that certain extracts were capable to inhibit the cell growth of MCF-7 cell line.

"Therefore, *Phyla nodiflora* extracts inhibit the cancer cells growth through apoptosis or other mechanisms.

"In conclusion, *Phyla nodiflora* has the potential to be developed into chemopreventive agent."

In Malaysia breast cancer tops the most frequent cancer in all ethnic groups. Women between 20-29 years experienced 72.4 per cent mortality rate due to lack of breast cancer awareness which pharmacists besides doctors can help to educate the public.

It was agreed at FAPA 2014 that physicians and clinical pharmacists are the major members of the multidisciplinary healthcare team that aims to achieve optimal patient health outcome.

Hence, collaboration between physicians and pharmacists is vital as the relationships and interaction between foods, dietary supplements and drugs are gaining recognition in the healthcare and medical fields.

Community pharmacists are the most accessible point in patient centred healthcare to be in a position to help an estimated 12 to 45 per cent of individuals using supplements with prescription drugs are at risk of interactions especially affecting high blood pressure which is a silent killer and the leading cause for heart failure, stroke and kidney failure, and community pharmacists are increasingly expected to be in the forefront to aid sufferers with proper advice on lifestyle choices besides nutrition or prescription drugs.