

Functional harmony



There's vast potential for functional foods in Asia, as a recent conference indicated.

BESIDES nutrients, foods also contain other components that are important to health. These components may provide beneficial physiological effects beyond basic nutrition.

Food containing these bioactive components are known as functional foods. The term "functional foods" may have gained prominence only in recent years, but in Asia, foods with functional properties have been regarded as an integral part of some cultures for centuries.

Among the Japanese and Chinese, for instance, it is believed that foods and medicine are of equal importance in preventing and treating diseases.

The 2nd International Conference on East-West Perspectives on Functional Foods was held in Kuala Lumpur from November 5-7. In this

meeting organised by the International Life Sciences Institute (ILSI, Southeast Asia Region)*, 200 scientists and regulators from 21 countries discussed the science, innovations and claims on functional foods. A total of 27 speakers touched on a variety of topics surrounding the topic.

Evolution of functional foods and a harmonised approach

To set the stage for the conference, two keynote lectures were first presented. Dr Richard Head, CSIRO, Australia, provided insights into the global evolution of functional foods.

Since the original International Conference on East-West Perspectives on Functional Foods held in Singapore in 1995, there has been a growing focus on the health potential of foods beyond sustenance.

He outlined the drivers for the development of functional foods and the issues surrounding the subject, including scientific substantiation and regulatory aspects.

He highlighted the challenges and opportunities ahead, including the growing capabilities associated with the cell genome (genomics, proteomics, metabolomics).

In the second keynote lecture of this conference, I summarised the main activities carried out by ILSI SEA Region over the last four years (2003-2006) to facilitate a harmonised approach to functional foods.

A series of three Asian Region Workshops and an Expert Consultation on functional foods were conducted.

These meetings were usually attended by about 30 participants, comprising regulators and scientists from selected countries in Southeast Asia, other parts of Asia and Australia and New Zealand.

The main output from these scientific meetings were a ILSI SEA Monograph on Functional Foods and guidelines for the scientific substantiation of claims, safety evaluation and a proposed regulatory framework for claims.

It is hoped that these documents can serve as references for regulatory agencies and scientists in the region. I also summarised the Asian Position on Functional Foods, agreed upon through this series of meetings.

Asian functional foods and innovative ingredients

In this first session of the conference, several foods and ingredients used in traditional Asian cuisine were discussed in relation to their functional properties.

Chinese wolfberry or the *Lycium barbarum* fruit is a Chinese medicinal plant which contains many micronutrients and phytochemicals. Known locally as *kei chee*, it is a commonly used ingredient in a variety of Chinese cuisines, and is one of my favourites too!

Prof Chan Soh-Ha of the National

University of Singapore reported that extracts of this fruit improved immune function in rats.

Professor Kim Jung-In of the Inje University, South Korea, discussed the functional properties of soya, yet another food item that has a long history of use in Asia.

Soya bean contains several components such as soy protein, isoflavones, oligosaccharides, dietary fibre, and pinitol, which could have health benefits, especially in relation to diabetes.

There were other functional ingredients discussed in this session.

Innovation and technologies for functional foods

Three presentations were made in this second session. Dr Richard Head of CSIRO, Australia discussed the challenges and opportunities facing the use of emerging technologies in functional foods. He elaborated on issues related to understanding the health potential of the food portfolio and the seamless integration of sciences in targeted areas.

Magdalene Wong of DSM Nutritional Products, Singapore, discussed the challenges faced by manufacturers in fortifying foods with functional ingredients.

She discussed innovations carried out on three functional ingredients to overcome these challenges, namely (1) carotenoids such as lutein, lycopene and beta carotene,

(2) EGCG (Eppigallocatechin Gallate), the major health ingredient from green tea and (3) the use of probiotics in dry foods.

Regulatory status of nutrition and health claims

In this session, four experts from different parts of the world described the regulatory status of nutrition and health claims on foods.

A common set of rules applicable to nutrition and health claims made on foods for the 27 member countries of the European Union (EU) was announced in December 2006. Jean Savigny, Keller and Heckman LLP Partner, Belgium outlined the development of Regulation (EC) N° 1924/2006, the definitions of the permitted nutrition and health claims, general principles and general conditions applicable to the use of the claims.

Due to increased demand for food products registered with health claims at the National Agency for Drug and Food Control (NADFC), a regulation on basic requirement for the control of functional foods was issued on January 2005. Professor Dedi Fardiaz of the NADFC Indonesia outlined the main features of these regulations.

Substantiation of health claims

Six presentations provided insights

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into the substantiation of health claims in different parts of the world.

The Japanese experience on evaluating scientific evidence on health claims was presented by Dr Keizo Umegaki of the National Institute of Health and Nutrition, Japan. He cited examples from the FOSHU system.

The Australian experience in substantiating high level and general health claims in the proposed new regulations on nutrition and health claims was elaborated by Professor Linda C Tapsell of the University of Wollongong, Australia.

Dr Joanne R. Lupton, Texas A&M University, US, summarised the approach taken by the US FDA (Food and Drug Administration) for scientific substantiation of health claims.

She described the health claim evaluation process and its application using actual examples of submitted health claim petitions.

Dr John Howlett, a consultant on food regulatory and scientific affairs in the United Kingdom, outlined the EU experience in evaluating scientific evidence for claims, especially the work of the European Food Safety Authority (EFSA).

Pauline Chan of the ILSI SEA Region, Singapore, shared with participants at the conference the three sets of guidelines developed through a series of workshops facilitated by ILSI, namely Guidelines for the Scientific Substantiation of Nutrition and Health Claims, Guidelines for safety evaluation and Proposed Regulatory Framework for Nutrition Labeling and Claims for Food.

Working together



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Communicating effectively to consumers

In the final session of the conference, six presentations on issues related to consumer understanding and communicating to consumers were presented.

Professor John Foreyt of the Baylor College of Medicine, US, described several communication strategies that are especially efficacious in helping consumers make healthful food choices and develop healthy lifestyles.

The presentation of Dr Philip Mohr of CSIRO, Australia, examined two issues relevant to consumer acceptance of functional foods: the

nature of people's reasoning about technological innovations and obstacles to health and dietary change. He discussed these in relation to challenges and opportunities for functional foods.

Findings from two surveys on consumer understanding and attitude towards functional foods or foods for health were presented by two speakers.

Wendy Reinhardt Kapsak of the International Food Information Centre (IFIC) discussed findings from surveys conducted in the US in 2007.

Helen Yu of the Asian Food Information Centre (AFIC) sum-

marised findings from its 2006 qualitative research on consumer perceptions of labelling and claims in Shanghai and Kuala Lumpur.

Three speakers from different food industry in various parts of Asia also shared their experiences in communicating the nutrition and health benefits of foods to the consumer.

These were Lackana Leelayouthayotin from Cerebos (Thailand), Dr Richard Walton of Meiji Dairies Corporation (Japan) and Leong Ming Chee of Nestle (Malaysia)

Way forward

At the close of the conference, I gave my thoughts on the way forward for functional foods in Asia.

I am of the opinion that it is still possible for a harmonised approach in the region, in spite of the slightly differing concepts and the lack of a global organisation leading the development.

I am optimistic because there is a great deal of potential for the development of functional foods in the Asian region.

As the way forward, I called for greater efforts in all activities related to the development of functional foods in the region. These include research and development efforts by food industries, capacity strengthening in conducting clinical trials and regulatory development to enable substantiated claims to be made.

I called attention to the need for ethical, effective communication of

benefits of functional foods to the consumers.

I urged the food industry to participate in promoting overall healthy eating in addition to the promotion of specific foods marketed.

I had emphasised that we need to strive for harmonised approach to the future development of functional foods. This will be beneficial to the advancement of the industry as well as bringing about greater consumer confidence in these products.

There has to be continued interaction among countries in Asia to further advance functional foods development.

**Information on the activities of the International Life Sciences Institute (ILSI) Southeast Asia Region are available in: <http://southeastasia.ilsil.org/>*

■ *NutriScene is a fortnightly column by Dr Tee E Siong, who pens his thoughts as a nutritionist with over 30 years of experience in the research and public health arena. For further information, e-mail starhealth@thes-tar.com.my. The information provided is for educational and communication purposes only and it should not be construed as personal medical advice. Information published in this article is not intended to replace, supplant or augment a consultation with a health professional regarding the reader's own medical care. The Star does not give any warranty on accuracy, completeness, functionality, usefulness or other assurances as to the content appearing in this column. The Star disclaims all responsibility for any losses, damage to property or personal injury suffered directly or indirectly from reliance on such information.*