starhealth@thestar.com.my

Discussing nutrition science

Global network of scientists discuss issues on nutrition, food safety, toxicology, risk assessment and the environment.

THE International Life Sciences Institute (ILSI) held its annual meeting in San Juan, Puerto Rico from January 18 to 24, 2008. I would like to share with readers some insights into the organisation as well as the main scientific issues discussed in the business meeting and at the scientific sessions.

ILSI – a global network of scientists

Founded in 1978, the International Life Sciences Institute (ILSI) is a non-profit, worldwide foundation that seeks to improve the well-being of the general public through the advancement of science.

Its goal is to further the understanding of scientific issues relating to nutrition, food safety, toxicology, risk assessment, and the environment by bringing together scientists from academia, government, and industry.

Headquartered in Washington, DC, ILSI accomplishes this work through its worldwide network of branches, and its Research Foundation. ILSI's global branch, the ILSI Health and Environmental Sciences Institute, focuses on global issues of human health, toxicology, risk assessment, and the environment. The branches are supported primarily by their industry members, comprising major food companies.

ILSI is governed by a Board of Trustees composed of at least 50% public sector representatives, primarily academic scientists, and the remainder are representatives of ILSI members. The Board elects officers, including a President and Chairman of the Board. I am currently serving as a member of the Board of Trustees for the Research Foundation and a member of the Board of Trustees for ILSI, representing the public sector.

ILSI in Malaysia

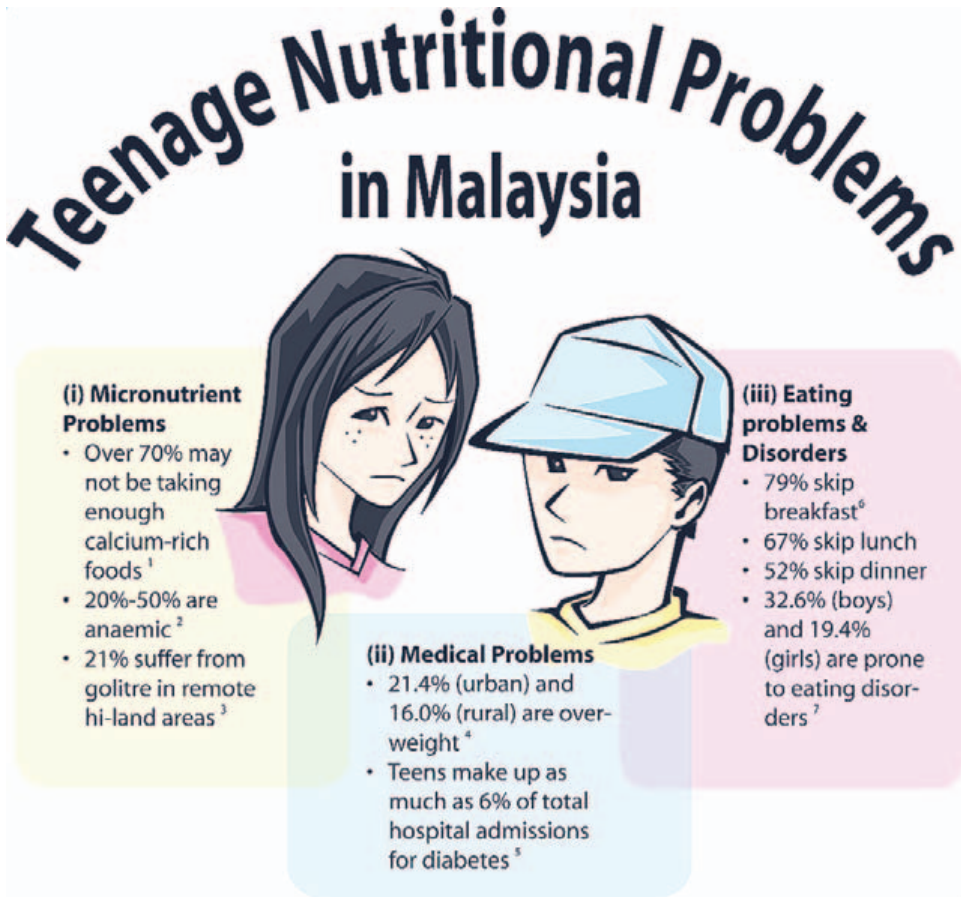
ILSI Southeast Asia Region (ILSI SEA Region), located in Singapore, serves as the regional office coordinating and overseeing activities for the entire geographical region of ASEAN, Australasia and the Pacific Islands. ILSI SEA Region provides access to the latest scientific information primarily through meetings and publications.

A country committee for Malaysia was formally established during an inaugural meeting in Petaling Jaya on November 23, 2005. Three scientific seminars on current topics have thus far been organised:

- Promoting Better Understanding of Nutrition Claims in Malaysia (May 16, 2006)
- Update on food allergies and labelling regulations (December 5, 2006)
- Trans fatty acids – scientific and regulatory update (September 4, 2007)

These were co-organised with the Food Safety and Quality Division of the Ministry of Health and well-attended by nutritionists and food scientists from government agencies, academia and the food industry.

These scientific meetings provided a platform for the main stakeholders, i.e. the government, the academia and the industry to discuss current food and nutrition issues specific to the country.



Scientific meetings provide a platform for the government, academia and industry to discuss current food and nutrition issues specific to the country.

Nutrition 'hot' topics in the ILSI annual meeting

Thirty scientific presentations covering the fields of food safety, nutrition (especially obesity), toxicology research and testing and health and environment science were presented at the scientific sessions organised in conjunction with the ILSI annual meeting.

Speakers were renowned scientific experts from academic research institutions, government organisations and industrial organisations. I would like to share with readers several nutrition "hot" topics presented.

The classical role of vitamin D is in the endocrine regulation of calcium homeostatis to support skeletal integrity. In her talk entitled *Vitamin D and health: UV, diet and/or supplement?*, Dr Stephanie Atkinson, professor of paediatrics, McMaster University, Ontario, Canada, presented data to show that the functional role of vitamin D has expanded beyond that of bone metabolism to other "non-bone" functions, including roles in cell differentiation, immune stimulation and in the regulation of blood pressure and insulin production.

Evidence is also emerging that optimal vitamin D status may be a factor in the prevention of several cancers, and autoimmune diseases such as multiple sclerosis and type I and type II diabetes.

Vitamin D has now become a "darling" of popular nutrition. With this potential expanded role of vitamin D in human health, Dr Atkinson emphasised that it is of paramount importance that optimal vitamin D status be defined and appropriate indicators for screening of individuals or populations identified.

For the population, nutritionists need to provide advice on how best to achieve optimal vitamin D intake, which can be from the sun, diet or appropriate supplementation.

Nutrition Facts Panel (NFP) on food labels in the United States aims to provide consumers with nutrition information. New systems are emerging which go beyond the NFP to provide nutrition information to consumers in a more simplistic fashion.

In her presentation on *Moving beyond nutrient facts panel: nutrient profiling and front-of-pack labelling*, Susan Bora, President of the International Food Information Council (IFIC) Foundation in Washington, DC, discussed the use of these two additional approaches to help consumers make better informed food choices.

Nutrient profiling is a system of categorising foods by evaluating their nutritional composition. FOP labelling is a method of communicating the overall healthfulness of food through the principal display panel on packages using different schemes, eg information/fact-based approaches, "better-for-you" icons and traffic light systems.

Borra reviewed the use of these schemes in some countries and provided some data on consumer perception and use. More details on the use of some of these FOP labelling schemes have been provided in my *NutriScene* write up of December 23, 2007.

WHO has a set of cut-off points to define overweight (BMI 25-29.9) and obesity (BMI =30). These criteria for classifying individuals as overweight or obese have been in use for many years in most countries.

Some countries in Asia have, in recent years, lowered their BMI cut-off points. China, for instance, has decided to use BMI = 23 to define overweight and BMI = 27 for obesity. Of course, the public health significance of this shift is that significantly more people are now classified as overweight and obese in China.

Dr June Stevens, professor of nutrition and epidemiology at the University of North Carolina, US, spoke of the selection of BMI cut-points for obesity in Asians. She questioned the validity of the lowering of BMI cut-off points by some countries.

She is of the opinion that the scientific data used to substantiate the lowering of BMI cut-points were not appropriate. Dr Stevens presented data and arguments to demonstrate her point, including literature review data as well as longitudinal data from her own studies involving white Americans and African Americans.

She found that there was no increased mortality with BMI < 25. Hence BMI-mortality evidence does not indicate a need for different cut-off points for Asians.

She understands that revision of definition of BMI for Asia is desirable from a political perspective as this will put obesity in the forefront of the health agenda. As a result, programmes will get more financial input.

However, from a scientific perspective, it is difficult to accept this revision, based on currently available data. The use of different BMI cut-off points by countries also makes international comparison of prevalence of overweight and obesity difficult.

I listened to two interesting papers on the relationship between obesity and micro-organisms and the macro-environment.

Firstly, on the macro-environment, Dr Donald Rose of Tulane University, New Orleans presented his lecture on *Where you are is what you eat*. He argued that environmental factors ("food environments") may play a prominent role in affecting health behaviours, such as dietary choices, that are associated with chronic diseases.

He reviewed the evidence from the psychology, marketing, consumer economics and public health disciplines on the role of environments in shaping consumer food choices.

Psychology literature has shown that the home and office environments affect what we eat. Subtle differences in the difficulty of obtaining food can affect the amount consumed.

Marketing literature has revealed that manipulation of supermarket environments affects consumer purchases. Shelf space and location as well as special displays have independent and positive effects on sales of particular food items. Price reduction strategies have often been used to promote product sales.

Obesity is often said to be caused by excessive caloric intake and a lack of physical activity. Dr Nikhil Dhurandhar of the Pennington Biomedical Research Centre, Baton Rouge, presented his findings on yet another cause of obesity, that of Virally-induced obesity.

In the last two decades, 10 obesity-promoting pathogens have been reported, including the first human virus, adenovirus type 36 (Ad-36), reported by Dr Dhurandhar, who specialises in "infections and obesity" or "infectobesity".

It has been shown that Ad-36 causes obesity in experimentally infected chickens, mice, rats and non-human primates. In humans, natural Ad-36 infection is associated with obesity and relative hypolipidAemia.

Like cancer, gastric ulcers or atherosclerosis, if a subset of obesity is caused by certain infections, limiting the spread of this type of obesity is potentially easier than preventing obesity due to genetic and other environmental factors.

Relevance to local scientific endeavours

It can be noted that all the scientific issues I have highlighted in this write up are of direct relevance to scientists in Malaysia as well. I would urge readers to find out more regarding these scientific activities either from ILSI headquarters (www.ilsi.org) or the Southeast Asia Regional office (www.ilsisea.org.sg).

There are also several ILSI branches that are worthwhile visiting, especially ILSI Europe (http://europe.ilsi.org). You should also make use of the wide variety of ILSI publications available, both in print and on the Internet, including scientific monographs, books and periodicals.

There are useful references on nutrition and diet, risk assessment, toxicology, pathology, allergy and immunology, and other environmental and health issues.

■ *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@thestar.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.*