



# International Life Sciences Institute

## SOUTHEAST ASIA REGION

NEWSLETTER

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**Global Experiences in Reducing Obesity in Communities**

Exploring Gene, Diet and Lifestyle Connections between **Brain and Gut Health**

**Setting Food Safety Standards:** ILSI SEA Region Facilitates Training in Vietnam

**Saturated and Trans Fat:** Current Status in Australia

# Healthy Eating & Active Living

## MESSAGE FROM THE EXECUTIVE DIRECTOR

ILSI SEA Region first embarked on addressing the issue of obesity in 1992 through a series of seminars, workshops and studies in a number of Southeast Asian countries, culminating in the development in 2000 of PowerKids™, an interactive educational resource for primary level students in Singapore. PowerKids™ includes modules on physical activity - PowerKids™ On the Go, as well as nutrition - PowerKids™ Eat Smart. Developed in collaboration with the Singapore Ministry of Education, PowerKids™ is available for all primary schools in Singapore, and has also been pilot-tested in Thailand and Indonesia. In reviewing the current status of obesity in the region, and how ILSI SEA Region can continue to contribute to this public health issue, two important meetings were organized in July 2010 and held in Singapore and Australia. Experts in obesity prevention from the Americas, Europe and Australasia were invited to share their experiences in building community-based intervention programs that have had positive impact on preventing or reducing obesity, and in promoting healthy eating and active living. Learning from these global approaches, ILSI SEA region will explore opportunities to expand our obesity prevention programs and establish new partnerships.



Another important focus for us this year is the topic of cognitive development and performance. With increased longevity among populations in Asia, there is growing interest in scientific research on cognitive development, function and performance throughout the lifespan. ILSI SEA Region is providing a platform for scientists from academia and industry to exchange state-of-the-art scientific knowledge in this field. In April, we organized a Science Symposium on "Optimizing Brain and Gut Health" in conjunction with our Annual Meeting 2010. We are also excited to be organizing a symposium on "Nutrition and Cognition" in October, where scientists and experts will explore the role of nutrition in cognitive development, share on current assessment methodologies and their applicability for different population groups, as well as consider the scientific substantiation and consumer understanding of claims.

This issue of our Newsletter provides a comprehensive summary of our meetings and activities thus far in 2010. We look forward to facilitating, and welcome your participation in our upcoming activities for the rest of the year!

Boon Yee Yeong  
Executive Director  
ILSI Southeast Asia Region

### ILSI SEA REGION GOVERNANCE & LEADERSHIP 2010 - 2011

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#### Director of Scientific Programs

Ms Pauline Chan



# ILSI Annual Meeting 2010

## ILSI Branches Share Past Achievements and Plan Future Collaborations



*ILSI SEA Region Branch Meeting*

Held on January 22-27, 2010, at Rio Mar Beach Resort and Spa, Puerto Rico, the ILSI Annual Meeting 2010 brought together members, trustees, scientific advisors, and staff from ILSI branches around the world. The meetings organized by various ILSI branches provided updates on recent and upcoming programs as well as discussion on new scientific challenges and emerging opportunities for ILSI to make a difference in public health.

The **ILSI Branches Meeting** on Friday, January 22, 2010, helped to build relationships and collaboration among the branch staff members. Water issues, nanotechnology, and obesity prevention were some of the global issues highlighted for future collaborations. The meeting also shared the new membership categories and the use of the new ILSI website and the ILSI journal *Nutrition Reviews* as resources for promoting ILSI. The proposed 2010-2014 ILSI Strategic Plan was also discussed in detail.

ILSI Japan, ILSI CHP Japan, ILSI Korea, ILSI Focal Point in China, ILSI India, and ILSI SEA Region came together for the **ILSI Asian Branches Meeting** on Saturday, January 23, 2010. Dr Myeong Ae Yu of ILSI Korea highlighted the ILSI Asian branches' past achievements, future programs, and emerging issues. The meeting also addressed various key collaborations in the Asian region. Mr Hiroaki Hamano of ILSI Japan elaborated on the progress of the project on Investigation of Commodity Food Standards in Asia. The micronutrient fortification programs in Asia were shared by Mr Geoffry Smith of ILSI SEA Region and Mr Takashi Togami of ILSI CHP Japan. Mrs Boon Yee Yeong of ILSI SEA Region shared on the role of ILSI in the APEC Partnership Training Institute Network initiatives while Dr Junshi Chen of ILSI Focal Point in China updated on various obesity prevention programs by ILSI Asian branches.

Our **ILSI SEA Region Branch Meeting** was held on Sunday, January 24, 2010. Mrs Boon Yee Yeong and Ms Pauline Chan of ILSI SEA Region shared the scientific program accomplishments for 2009, and the branch development

and scientific program planned for 2010 and 2011. The meeting also covered current issues in the Southeast Asia region – Dr Mathew Lau, a scientific advisor of ILSI SEA Region, outlined challenges and opportunities surrounding food safety issue in the region while Mr Geoffry Smith, ILSI SEA region President, shared on past and future measures in tackling micronutrient deficiencies. The discussion session was focused on potential area for ILSI SEA Region to take on in 2010. Some of the areas suggested included nutrigenomics application for salt sensitivity, vitamin D status in Asia, and food composition database.

**ILSI Europe – ILSI SEA Region Lunch Meeting** was held on Tuesday, January 26, 2010. Information on the activities of both branches was exchanged with discussion on potential collaboration in various areas such as ILSI Global Project on Water, micronutrient intake requirement, food-based dietary guidelines, scientific substantiation of nutrition and health claims, as well as nutrition and cognition area.

ILSI Branches' posters were displayed during the **ILSI Poster Session**. ILSI SEA Region's poster focused on the partnership the branch has built for the year 2009 as well as past programs dedicated to translate science into action.



*ILSI SEA Region Directors, Scientific Advisors and staff with the branch's poster display*

The ILSI Annual Meeting 2010 also delivered scientific sessions and discussion forums covering broad spectrum of topics held on January 25-26, 2010.

## Scientific Sessions at the 2010 Annual Meeting

The **Risk Assessment and Functional Foods Discussion Forum** highlighted ILSI initiatives to advance risk assessment and address functional food issues. In the field of risk assessment, ILSI's work relating to the framework for assessing the human relevance of a mode-of-action, the Threshold of Toxicological Concern (TTC), the global threshold project, and the risk assessment in the 21st century project were elaborated by Dr Sam Cohen of University of Nebraska Medical Centre, Dr Susan Felter of Procter & Gamble, Dr Alan Boobis of Imperial College London, and Dr Michelle Embry of ILSI HESI respectively. ILSI's contributions in bridging the science and applications of functional foods and future perspective were each shared by Ms Pauline Chan of ILSI SEA Region and Dr Stephane Vidry of ILSI Europe.

The **Carbohydrate Forum** exchanged key messages based on recent, ongoing and future works in the area of sugars, dietary fibres, prebiotics, and carbohydrate metabolism and physiological process, as well as identified opportunities for collaboration and partnership.



*Risk Assessment and Functional Foods Discussion Forum*

**ILSI North America Scientific Session on Financial Conflicts of Interest and Scientific Integrity** provided an overview of the issues and perspectives from both academic and industry scientists including Ms Sylvia Rowe of SR Strategy LLC, Dr Joanne Lupton of Texas A&M University, and Dr Catherine Woteki of Mars Inc. Dr Esther Myers of the American Dietetic Association also raised the subject of whether the quality of nutrition-related research is determined by the funding sources.



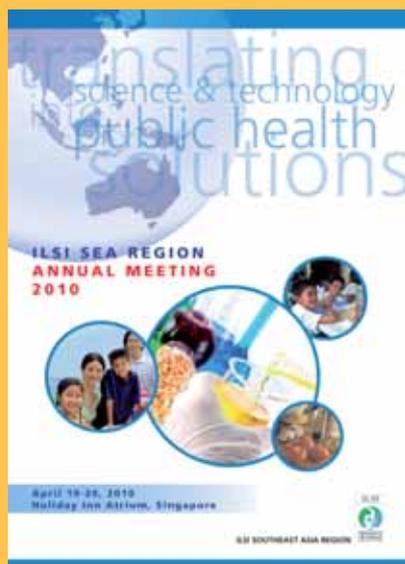
In the **ILSI North America Scientific Session on Unintended or Unexpected Effects Associated with Changes in Food and Diet**, Dr Charles Santerre of Purdue University shared advice for effectively communicating the healthfulness of seafood while Dr Michael Doyle Science of University of Georgia pointed out food safety concerns associated with reducing sodium in foods. The unexpected results on biomedical research and the learning points were illustrated by Dr David Allison of University of Alabama.

**ILSI Research Foundation Scientific Session on What Can Medicine Teach Nutrition about Translational Science** saw speakers such as Dr Anantha Shekhar of Indiana University, Dr Connie Weaver of Purdue University, Dr J Bruce German of University of California-Davis, and Dr Richard Black of Kraft Foods, providing overview, application, research models and effective nutrition education.

**ILSI North America Scientific Session on Functional Neuroimaging, Flavor and Food** provided insight on human olfactory imaging, flavor processing in human brain, craving, addiction and desire mechanism as well as fMRI response to taste in the hungry brain. The session saw various speakers such as Dr Jay A Gottfried of Northwestern University, Dr Johan N Lundstrom of University of Pennsylvania, Dr Marcia Levin Pelchat of Monell Chemical Senses Center, and Dr Claire Murphy of San Diego State University.

**ILSI IFBiC Scientific Session on Connecting with the Science of Food and Feed Crop Improvement and Detection** provided the risk evaluation associated with master genes engineering, the concern of genome instability in combining traits, as well as the harmonization status of 35s and Tnos detection methods by Dr Wayne Parrott of University of Georgia, Dr L Curtis Hannah of University of Florida, and Dr Marcia Holden of National Institute of Standards and Technology.

Most of the presentation slides for the scientific sessions and discussion forum, as well as the entity poster of each of the ILSI branches, have been made available at <http://www.ilsi.org/Pages/2010AnnualMeetingPresentations.aspx>.



## ILSI SEA Region Annual Meeting 2010

ILSI SEA Region members, directors and advisors came together once again at the ILSI SEA Region Annual Meeting 2010 held on April 19-20, 2010, at Holiday Inn Atrium, Singapore. The one-and-a-half day meeting reviewed the branch's performance over the past year and discussed its scientific program direction for 2010-2011. In his President's Address, Mr Geoffry Smith stated that *"ILSI SEA Region remains committed to maintaining its relevance to its members, building upon the trust it has established with its non-industry stakeholders and partners. It will continue to address vital issues important for public health, foster harmonization in a diverse region and development of local and regional capabilities, as well as advance science and new technologies."*

During the Assembly of Members meeting, ILSI SEA Region elected two new member directors, Dr Harvey Glick of Monsanto and Dr Seiji Aoyagi of Abbott Nutrition R&D, to serve alongside with existing directors. The meeting also elected Dr Hataya Kongchuntuk of Mead Johnson Nutrition and Dr Roger Bektash of MARS as the new honorary secretary and treasurer respectively. Toward the end of the Assembly of Members meeting, ILSI SEA Region presented the Recognition Award 2010 to Mr Philippe Gallardo of Nestle Singapore and Prof Geok Lin Khor of Universiti Putra Malaysia, in appreciation of their outstanding and valuable contributions to ILSI SEA Region as member director

**ILSI SEA Region remains committed to maintaining its relevance to its members, building upon the trust it has established with its non-industry stakeholders and partners. It will continue to address vital issues important for public health, foster harmonization in a diverse region and development of local and regional capabilities, as well as advance science and new technologies."**

and scientific advisor, respectively.

*"Partnership has always been the key to maximizing our impact"*, said Mrs Boon Yee Yeong, ILSI SEA Region Executive Director, as she highlighted some of the branch's collaborations with other ILSI entities and the development of strategic alliances around the Asia Pacific region. An example of such collaboration was highlighted by Mr Hiroaki Hamano, President of ILSI Japan, who updated on the progress of the ILSI Asian branches joint project on food commodity standards and analytical methods harmonization.



Assoc Prof Samir Samman and Ms Megan Cobcroft

on the past year's activities and proposed program for the coming year. Ms Pauline Chan, Scientific Director of ILSI SEA Region, elaborated on the concept of ILSI SEA Region Flagship Programs, which aims to enable each Science Cluster to meet public health needs and priorities of ILSI SEA Region's stakeholders. The Flagship Program will feature as signature programs to strengthen ILSI SEA Region's leadership role and maximize its impact in those scientific fields, and will be evaluated at the end of 2-3 years.

**Partnership has always been the key to maximizing our impact"**

Each Science Cluster also held their respective program planning session to review past activities, set the directions of upcoming programs, and identify emerging issues of public health importance in the region. The annual meeting was wrapped up with the half-day Science Symposium on Optimizing Brain and Gut Health: Genes, Diet and Lifestyle.



Mr Geoffry Smith, President; Mrs Boon Yee Yeong, Executive Director of ILSI SEA Region

The Annual Meeting continued with a Joint Board of Directors & Executive Committee meeting, which discussed the branch's development and communication strategies, the role of its scientific advisory committee and other organization matters. This was followed by scientific program planning and discussion where the branch's Country Committee coordinators from Australasia, Indonesia, Malaysia, Philippines and Thailand each reported

## Science Symposium at the ILSI SEA Region Annual Meeting 2010



*Prof Michael Meany presenting at the Science Symposium*

### Optimizing Brain and Gut Health: Genes, Diet and Lifestyle

With increased longevity in many societies, there is growing interest in scientific research that looks into the optimization of physical and cognitive function and performance throughout the lifespan. Factors such as our genes, the food we consume, the environment and our lifestyle choices may modify the risk or severity of degenerative diseases. There is also mounting evidence that early fetal nutrition, depending on maternal intake of certain foods and food components, and the ambient environment, may substantially influence, for better or for worse, our genetic potential for health.

To address these issues, ILSI SEA Region in collaboration with the Commonwealth Scientific and Industrial Research Organization of Australia (CSIRO) organized a half-day science symposium on **Optimizing Brain and Gut Health: Genes, Diet and Lifestyle**, in conjunction with ILSI SEA Region Annual Meeting 2010. Held in Singapore on April 20, 2010, the science symposium was attended by over 100 participants including representatives from food industries, government officials, nutrition and public health professionals, and academics.

### Epigenetics, Nutrigenomics and Biomarkers of Brain and Gut Health

The symposium was opened by a lecture from Prof Michael Meany,

a James McGill Professor at McGill University, Canada, as well as an Associate Director at the Singapore Institute for Clinical Sciences. He presented an interesting finding from animal studies on how maternal care (licking / grooming) may alter the offspring's behavioral and endocrine responses to stress through changes in the expression of genes mediated by DNA methylation in relevant brain regions. These effects lasted into adulthood after the offspring was weaned from the mother. Maternal care also influenced gene expression in fat tissues and this effect was associated with obesity risk and insulin sensitivity. Such findings may provide a biological basis for the epidemiologically defined link between family function and health in adulthood.

Prof Michael Fenech of CSIRO Food & Nutritional Sciences, Australia, presented another angle of health optimization at the DNA level. It is becoming increasingly evident that the risk for developmental and degenerative disease increases with more DNA damage, which in turn is dependent on nutritional status, environment and life-style. Genome stability processes are modulated by various vitamins and micronutrients. Dietary patterns, functional foods and supplements that are designed to improve genome maintenance in individuals with specific genetic backgrounds may provide

an important contribution to an optimum health strategy for disease prevention. The optimal concentration of micronutrients for prevention of genome damage is only just starting to be defined and is also dependent on polymorphisms in genes involved in the uptake and metabolism of micronutrients required for DNA repair and DNA replication. Given the central importance of DNA damage as the most fundamental disease, it is becoming essential to define dietary reference values for maintenance of optimal genome integrity during the different life-stages. These principles are being translated into clinical practice via the Genome Health Clinic concept based on personalized diagnosis of DNA damage and its prevention using dietary and lifestyle strategies.

Presenting on behalf of Dr Cassandra Szoek from CSIRO Preventative Health Flagship, Prof Richard Head shared on the Australian Imaging, Biomarker & Lifestyle Flagship Study of Ageing. The prospective longitudinal study examines cognitive changes in ageing Australians with aim to improve understanding of the causes and diagnosis of Alzheimer's disease (AD). It focuses on early detection through neuroimaging, biomarkers and improved clinical phenotypes and examines preventive lifestyle and



*Prof Michael Fenech taking questions from the Science Symposium audience*

dietary factors that might delay the onset of AD toward developing clinically proven preventative strategies.

### Application of Science and Technology for Optimal Brain and Gut Health

In the following session, the topics moved toward application of this knowledge. Prof Yuan Kun Lee of National University of Singapore provided some insight on how to harness the interaction of microbiome and diet for gut health. Diet may alter the intestinal microbiota profile, for better or worse. On the other hand, intestinal microbiota may alter dietary metabolism, nutrient absorption and host physiological functions. For example, high lipid diet alters the gut microbiota, leading to chronic inflammation, lipogenesis, steatosis, and potential cancer development. Sugar or phenolic constituents in the diet may affect the adhesion of intestinal microbiota in favor of either probiotics or pathogens. These dietary constituents are also digested by intestinal microbiota to release metabolites that determines energy metabolism, microbial and immunological profile, leading to either health or diseases. Understanding these interactions between the intestinal microbiota, local dietary components and host physiology is crucial in facilitating the effective application of probiotics and diet in disease prevention and treatment.

Prof Ernst Reimerdes of the German Institute for Food Technology shared on the technology perspective on bioactive ingredients, functional application and impact on gut health. Food science and related product development have reached the molecular level, entering a new dimension of better understanding of food and nutrition. Gut physiology, responsible for the refinement and bio-utilization of the various types of nutrients, is one of the key elements for achieving health potentials. Pro- and pre-biotics play a major role in gut and health relationships, completing their metabolic pattern and profile. Thus, he opined that a holistic approach is necessary via nutrigenetics which

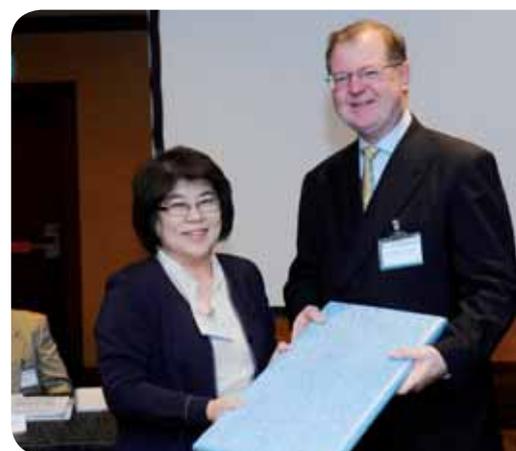
involves understanding of bioactive metabolism, bioavailability and bioutilization as well as the appropriate matrix design and technology approach to harness the structure-activity relationship.

Dr Tapas Das of Abbott Nutrition R&D, Singapore, offered industry's perspective in translating nutritional and cognitive science into application. He highlighted the global prevalence of dementia due to the aging population and the lack of an effective pharmacological approach to manage dementia. Asia offers a great potential for nutritional intervention for cognitive impairment with its vast usage of functional ingredients such as Ayurvedic or traditional Chinese medicine. More information however needs to be established on these natural ingredients, especially with regards to the toxicity, safety and clinical efficacy. Multiple signaling pathways are affected in cognitive decline and nutrition may affect cognitive processing at many levels and through a variety of pathways. To overcome the challenges, nutritional product development would need to target multiple pathways, use multiple active ingredients with clinically proven safety and efficacy, and to be aimed at specific population. The stability, palatability, packaging and affordability would also need to be considered.

The session ended with a presentation by Prof Head on the importance of early detection, adoption, and market application as key approaches for optimizing brain and gut health. The CSIRO Preventative Health Flagship focuses on two key disease states, namely AD and colorectal cancer. Methods for early diagnosis of AD are of paramount importance. AD is hypothesized to be caused by misfolded proteins known as  $\beta$ -amyloid ( $A\beta$ ) that aggregate to produce toxic oligomers, leading to inflammation, fibril formation and necrosis. Quantitative imaging may help to diagnose this amyloid load. The colorectal cancer approach focuses upon both detection and potential intervention. Detection research uses genomic, epigenetic and proteomic analysis to identify new biomarkers

for early stage disease while prevention strategy focuses on the role of resistant starch and its fermented products i.e. short chain fatty acids in bowel health. Finally, the research needs to be translated into market application and a new barley variety with unique starch and grain composition is currently undergoing health and nutrient claim substantiation process.

In her concluding remarks, Mrs Boon Yee Yeong, Executive Director of ILSI SEA Region, thanked all the distinguished speakers and chairs of the science symposium. She noted that exciting researches to promote brain and gut health are underway and the organization remains committed to promoting and disseminating science-based knowledge for public health advancement. To further share the latest scientific research in the area of brain health, ILSI SEA Region and CSIRO will co-organize a Symposium on Nutrition and Cognition to be held in October 2010 in Malaysia.



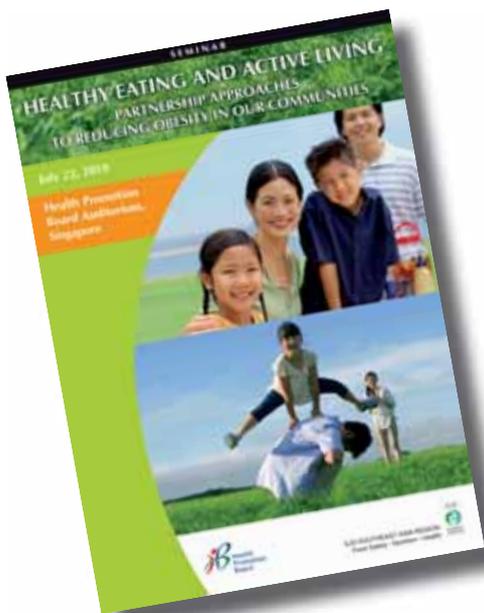
*ILSI SEA Region President presents Prof Geok Lin Khor and Mr Philippe Gallardo with the Recognition Award 2010*

# Reducing Obesity in Our Communities: Approaches & Perspectives From Around the Globe

The escalating worldwide trend in overweight and obesity and associated health risks has been attributed to a complex combination of changing food availability, consumption habits, environment, genetic and socioeconomic factors. Dietary excesses and physical inactivity are the main underlying causes of undesirable weight gain, and ILSI has been actively involved in addressing overweight and obesity among children through ongoing collaborations on innovative community- and school-based intervention programs.

Obesity remains a high priority public health issue in Southeast Asia and Australasia, and to address this issue, ILSI SEA Region organized two meetings in July 2010 to provide platforms for updating the science and sharing of successful community-based programs from different parts of the world that have shown positive impact on physical activity and dietary behavior.

## Obesity Seminar in Singapore



The Singapore seminar was held at the Health Promotion Board Auditorium

The Singapore seminar was held on July 22, focusing on the theme of “Healthy Eating and Active Living – Partnership Approaches to Reducing Obesity in our Communities”. The meeting was co-organized with the Singapore Health Promotion Board, a key driver for reducing obesity and achieving optimal health among the population

### Lessons from Policies and Programs Around the Globe

Experts who shared on different programs and approaches to obesity prevention and control from around the world included Dr Annie Ling, Director of the Adult Health Division of HPB, Singapore; Dr Michael Pratt, Chief of the Physical Activity and Health Branch of the National Center for Chronic Disease Prevention and

Control, USA; and Dr Jean-Michel Borys of EPODE, France.

Opening the symposium with her keynote address, Dr Annie Ling shared Singapore’s current efforts in obesity prevention and control. A wide range of initiatives and programs are targeted at various settings such as schools, workplaces,

**“Moving forward, early childhood is a critical area for action. Engaging non-traditional, non-health partners is necessary, as is continuing to strengthen the evidence-base for actions in research and programs.”**

industry, healthcare and the community. She highlighted the HPB’s integrated approach which incorporates political leadership as well as public relations and mass media campaigns. Creating a

conducive physical environment, and building partnerships and advocacy, are also key strategies. Dr Ling also emphasized that, “Moving forward,



Dr Annie Ling, Director of the HPB's Adult Health Division, gives her keynote address

*early childhood is a critical area for action. Engaging non-traditional, non-health partners is necessary, as is continuing to strengthen the evidence-base for actions in research and programs."*

Experiences and lessons from the Americas, particularly in the area of promotion of physical activity, was shared by Dr Michael Pratt, who noted that *"Physical inactivity is a serious public health issue but relatively few countries have integrated systems for physical activity promotion."* To ensure that policies are effectively implemented, he reviewed the framework for evidence-based public health that incorporates good science with community preferences at a population scale. Evidence-based public health practice includes: (a) policy framework, (b) surveillance, (c) evidence-based interventions, (d) guidelines, (e) evaluation, (f) communication (public and policy makers) and (g) partnerships/networks. Dr Pratt then shared lessons learnt from key programs in Latin America, and noted that successful programs feature national strategies that are innovative and cost effective by making use of public spaces, as well as partnerships that offer powerful synergies, bring about positive health and social impact, and enhance the quality of life.

A successful model and framework for obesity prevention developed in Europe and known as EPODE (Ensemble, Prevenons l'Obesite Des Enfants) was presented by Dr Jean-

Michel Borys, who reviewed the reach of EPODE with efforts now expanded to more than 200 towns in France, and projects in Greece, Mexico, Spain, Australia and Belgium. The EPODE process requires political support and endorsement from national and local governmental organizations, public-private partnerships, the commitment of resources and funding, as well as training provided by a project manager, for a period of at least 5 years. Using evidence-based social marketing techniques, EPODE programs focus on young children up to 12 years. Dr Borys also shared that the general EPODE framework involves a bottom up and top down approach and uses an adapted methodology considering each country's available means, resources and political environment.

### New Perspectives and Innovative Approaches

Looking at the obesity epidemic from an economic perspective was Dr Eric Finklestein, Deputy Director of the Health Services and Systems Research Program at Duke-NUS Graduate Medical School, Singapore. Dr Finklestein pointed out the economic forces that have shaped the obesity epidemic – lowered cost of food consumption, increased costs of being physically active, and decreased (health) cost of excess weight. These factors can be influenced by incentives and disincentives, to encourage healthy behaviors.

Turning to the topic of geography, Dr Adam Drewnowski, Director of the University of Washington Center for Obesity Research in Seattle, USA, examined how food consumption patterns also show a special distribution. Dr Drewnowski's research

shows that the geographic distribution of wealth and social class, as well as financial disparities in access to healthier diets, may help to explain why the highest rates of obesity and diabetes are found among minority and poorer population groups.

Placing emphasis on the family setting was Dr Karen Campbell, Senior Research Fellow (Public Health) at Deakin University, Australia. She presented on The Melbourne InFANT Program research study which seeks to provide first-time parents with knowledge, parenting skills and strategies to promote healthy eating, promote physical activity and limit sedentary behaviors in infants. Dr Campbell stressed that parents play a key role as the primary provider of an obesity-protective or obesity-promoting family environment. They also have the potential to advocate for and to endorse broad reaching social policy that will support their desire to raise healthy children.

A brief overview of the role of the food industry as a key stakeholder in the management and prevention of the obesity epidemic was shared by Ms Jamie Liow, Corporate Nutrition Advisor at Nestle Singapore. She shared that Nestle is committed to developing healthier food products for consumers to make informed food choices.

**Physical inactivity is a serious public health issue but relatively few countries have integrated systems for physical activity promotion."**



Dr Jean-Michel Borys shares on the EPODE framework



## Sharing of Successful Programs

Examples of successful obesity prevention programs targeted at different population groups were presented:

- Dr Takashi Arao of Waseda University, Japan shared on a community-based obesity prevention program for middle aged and older adults that showed significant improvement in body composition and was effective in promoting changes in exercise and dietary behaviors in overweight and obese adults.
- Dr Michael Pratt presented Exercise is Medicine™ (EIM), a global initiative focusing on encouraging primary care physicians and other health care providers to include physical activity and exercise promotion as a “vital sign” in counseling patients. The EIM initiative, which is US-based, now has successful collaborations globally.
- Mr Devindra Sapai, Dean of Pupil Development at Seng Kang Primary School, Singapore, showcased the school’s successful Daily Physical Education (PE) program and how the school creatively worked around the curriculum timetable, school cum PE attire and use of facilities and resources to support this program.
- Ms Pauline Chan, Director of Scientific Programs of ILSI SEA Region presented PowerKids™, a resource tool and educational program developed by ILSI SEA Region to assist school teachers in promoting healthy weight among young children through knowledge and skills in physical activity and nutrition. PowerKids™ was developed in collaboration

with Singapore’s Ministry of Education and has been implemented in several primary schools here. Reaching out beyond Singapore, PowerKids™ has also been translated and piloted in Thailand and Indonesia. Evaluation results from the Singapore, Thailand and Indonesia programs have shown that children’s dietary behaviors and physical activity can be changed in a positive manner through education.

## ILSI and the Obesity Issue

Highlighting ILSI’s initiatives and contributions to addressing the priority issue of childhood obesity over the last 14 years was Ms Debra Kibbe, Director of the Physical Activity and Nutrition Program at the ILSI Research Foundation. ILSI has worked to build the science on obesity and its related behaviors by hosting scientific meetings and workshops, publishing reviews and journal articles, and supporting translational research projects. ILSI has also developed targeted intervention programs, such as incorporating physical activity in a classroom setting. Through these efforts and experience gained, some key success factors ILSI has learnt include (a) identifying appropriate and effective public-private partners, (b) ongoing relationship building and communication among partners help to develop capabilities, (c) well-designed evaluation provide evidence

A day after the seminar, our speakers had the opportunity to visit Seng Kang Primary School to observe their students engaging in daily physical education (PE). Ms Debra Kibbe of ILSI Research Foundation took the opportunity to introduce two Take 10!® activities to four classes of Primary 4 students and their PE teachers in the school hall. The students participated eagerly and had much fun stomping away and swinging their arms. Dr Jean-Michel Borys and Dr Takashi Arao were taken on a mini school tour and got to put on kangaroo boots that allows one to burn more calories while walking. The Principal and Dean of Student Development were clearly impressed



by the Take 10!® program and ILSI hopes to have the opportunity to collaborate with schools in its efforts to manage and prevent obesity in children.

Our speakers then visited Cherie Hearts @ Limau childcare center where a class of Kindergarten 2 children took part in age-appropriate Take 10!® activities during their classroom time. Thereafter, the school administrator took the speakers

on a tour around their childcare center and shared their center’s commitment to serving healthier foods, especially more vegetables to preschoolers.



Ms Debra Kibbe of ILSI Research Foundation presents the Take 10! Program

for bringing the program to a wider audience, (d) replicability and sustainability can be achieved through flexibility to “fit into” different systems (schools, worksites etc), and even different countries. Identifying research gaps and working to fill unique niches with regards to studies in obesity prevention and control has been a successful model for ILSI. Ms Kibbe concluded that *“Ultimately, the goal is for ILSI to collaborate on a multi-country translational research project that will collect and compare obesity related data.”*

Wrapping up the seminar was a productive panel discussion that drew questions from the audience ranging from health professionals, physical educators, teachers and the food industry. It is hoped that this seminar will successfully pave the way for future collaborations between ILSI SEA Region and relevant stakeholders in a joint effort to address the obesity situation in Singapore.

## Obesity Symposium in Australia

The symposium in Sydney, Australia – “Reducing Obesity in our Communities: Applying Global Experiences in Healthy Eating & Active Living” was held from July 26 to 27, 2010. Our collaborators for this meeting were the Sydney West Health Service and the Center for Health Innovation & Partnership (CHIP). Both organizations aim to build sustainable, high quality and responsive healthcare delivery for major illnesses, including obesity and related chronic conditions, in western Sydney.

Reinforcing the focus topics of the Singapore seminar held the week before, the key objectives of the Australia symposium were to (a) promote a healthier food supply and physical activity as two important, sustainable strategies for obesity prevention and management; (b) provide a platform for sharing of international and national best practices in preventing and managing obesity; (c) develop local and community partnerships to promote healthy eating and active living; as well as (d) examine assessment, monitoring of evaluation and information systems to support best practices.

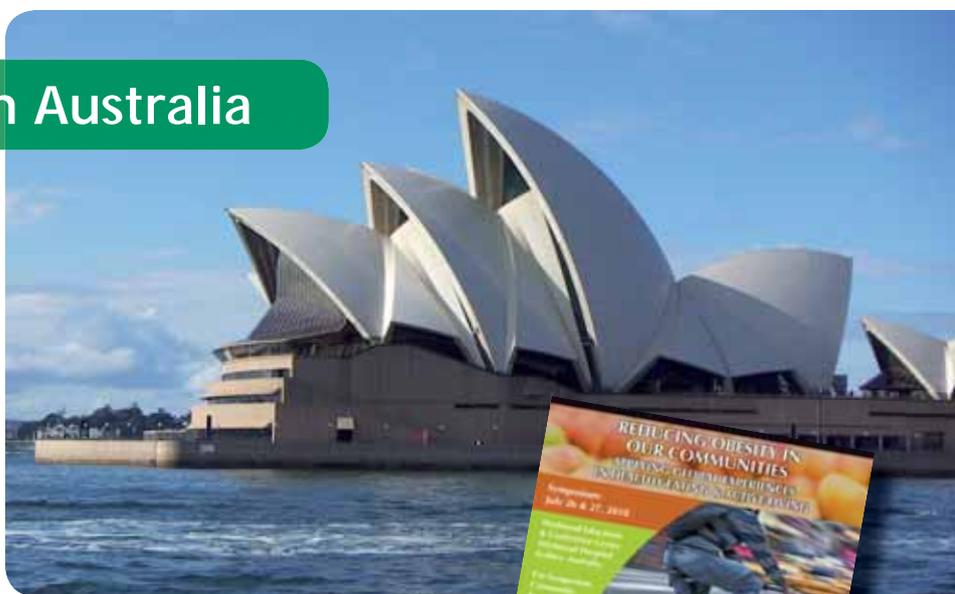
### Australian Approaches to Community-based Obesity Prevention

The first two plenary sessions of the symposium featured presentations by experts from the Americas, Europe, Asia and Australia on their respective efforts and programs aimed at obesity prevention and management. Several of the experts who presented in Singapore now shared their work and

experiences gained with the audience in Sydney.

Highlighting research and initiatives in Australia were several scientists and experts from academia as well as government health agencies. Dr Boyd Swinburn of the WHO Collaborating Centre for Obesity Prevention at Deakin University, Australia, shared that “first generation” obesity prevention studies targeted at children

and adolescents were dominated by pre-developed programs applied mainly in school settings. However, such studies have often not yielded positive outcomes. Recent studies that have taken a whole-of-community approach by engaging multiple settings and implementing multi-strategy interventions over several years have shown more encouraging results. He added that the next challenge is to take the emerging evidence from these



successful “projects” and converting it into “systems” for obesity prevention within communities. To do so, he emphasized that *“Australia needs to move towards creating the monitoring programs, knowledge exchange systems and implementation support services to bring together emerging evidence and local expertise to create best practice for promoting healthy eating, physical activity and healthy weight in children and adolescents.”*

Ms Michele Herriot, Director of the Health Promotion Branch within the

support good health. Currently in six communities, OPAL will soon expand to more locations and is also the most significant health promotion program in South Australia.

A range of new programs in the state of New South Wales (NSW) targeted at children and adolescents, as well as

new public investments and fundings in such programs, were shared by Dr Brendan Goodger of the Center for Health Advancement, NSW Department of Health.

Examining options for improving the effectiveness of community-based obesity prevention, Assoc. Prof Tim Gill of the Boden Institute for Obesity, Nutrition and Exercise, University of Sydney, gave his opinion on how best practice in

obesity prevention should be defined. As the responses of individuals and communities to obesity prevention interventions are often unpredictable due to the complexity of social and psychological factors, best practice in obesity prevention should be defined by the quality of both the process and the intervention’s efficacy.

## Healthy Food Supply and the Role of Industry

The food supply plays a crucial role in the obesity prevention strategies, and this issue was addressed by Dr Bruce

Neal, Senior Director of The George Institute for International Health, Australia, as well as Ms Peta Craig, Manager of Nutrition Policies and Codes at the Australian Food and Grocery Council. Dr Neal elaborated that the current global epidemics of chronic diseases such as obesity are in large

part attributable to the food industry’s success in offering food products at very low cost and on a large scale. The food industry should continue to improve the nutritional quality of their products, and be subject to systematic and objective monitoring of its commitments and actions. Ms Craig concurred that *“one of the most important roles of the Australian food manufacturing industry is ensuring Australians have access to nutritious, safe and cost-effective food to help ensure maximum health and wellbeing.”*

She also shared that under the Food and Health Dialogue initiated in 2009, public and private stakeholders would work collectively on the areas of food reformulation to reduce levels of risk-associated nutrients, standardizing and establishing appropriate portion sizes for food and drink products, as well as consumer awareness activities that promote healthy eating patterns and food choices. By taking a multi-faceted approach, the food industry can contribute towards driving the preventative health agenda.

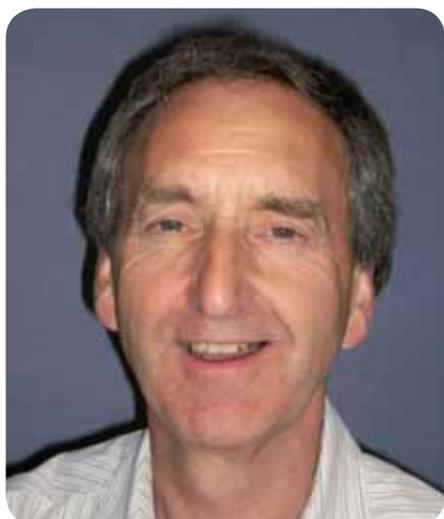
In addition to four plenary sessions, the Symposium also included several concurrent sessions that focused on the themes of *“Building a Framework for Local Action”*, as well as *“Mobilizing our Communities”*. The insightful presentations and fruitful discussions during the symposium provided strong encouragement that multi-sector partnerships across civic, public, private and academic organizations, and most importantly, the open exploration and adoption of effective ideas from different parts of the world, can lead to action and success in preventing obesity in our communities.



Dr Jean-Michel Borys, Mrs Boon Yee Yeong and Dr Glen Maberly enjoy a tour of the Sydney Harbour

South Australian Department of Health presented on the OPAL (Obesity Prevention and Lifestyle) program implemented in communities in South Australia since 2009. Encouraged by the positive preliminary results of the EPODE program in France, South Australia developed OPAL based on a similar framework, and aims to improve healthy eating and physical patterns of children. Using the EPODE methodology, OPAL uses themes to focus attention on key behavior changes required, and also seeks to change environments in a range of settings to

*“Australia needs to move towards creating the monitoring programs, knowledge exchange systems and implementation support services to bring together emerging evidence and local expertise to create best practice for promoting healthy eating, physical activity and healthy weight in children and adolescents.”*



## Dr Roger Bektash Director of Scientific Affairs, Mars Inc. and Vice President of ILSI SEA Region

Dr Roger Bektash is the Director of Scientific Affairs for Mars Inc.'s operations in Australia and Asia. He is responsible for regulatory and scientific affairs and policy development in the Asia Pacific region focusing on health and nutrition, food labeling and safety. Dr Bektash is also involved in nutrition research activities focusing on the impact of foods and eating patterns on dental health, physical performance, glycemic response, cholesterol lowering as well as the role of cocoa flavanols in health.

**Q:** In 2010, ILSI SEA Region has focused again on the obesity issue through 2 important meetings in Singapore and Australia. From your perspective, how has the global obesity epidemic evolved over the last 10 years, and are there new issues or challenges to be addressed?

**Dr Roger Bektash (RB):** There is well founded concern for the health of current and future generations due to overweight and obesity, particularly in the emerging economies of our region. The rapid social changes associated with urbanization, new work patterns and family structures, are leading to lifestyle and dietary practices that are, in many cases, not consistent with the maintenance of healthy weight or indeed wellbeing.

Whilst a reduction in the rate of increase in overweight and obesity has been recently observed in children in Singapore and Australia, the absolute numbers are still too high, and rates continue to rise in many countries in the region. ILSI SEA Region can play a significant role in developing a better understanding of the issue and in demonstrating programs that effectively address the needs for a better informed public and the provision of improved opportunities for healthy lifestyles and diets.

**Q:** For the developing countries in Southeast Asia where obesity is a growing problem, what are some lessons and experiences they can learn from more developed regions such as Australasia?

**RB:** The initial efforts to find "the cause" and "someone to blame" for the increase in obesity, has given way to the recognition that there are multiple deep sociological factors that need to be addressed. The recognition that all stakeholders can be part of the solution has been a major step, together with the demonstration that the food industry can, has already commenced and will continue to develop products and ways of business that assist consumers to manage their diet through the provision of information such as energy per serve on "front of pack", reformulation of products to reduce energy density and ingredients of concern, provide smaller portion sizes and to market responsibly, particularly to children.

**Q:** In the past decade, you have been actively involved in ILSI SEA Region's programs and activities in obesity prevention, especially in the area of childhood obesity. Looking ahead, what do you think are some of our opportunities, and what do you hope for ILSI SEA Region to achieve in tackling this crucial public health issue?

**RB:** I can see many opportunities for ILSI SEA Region to lead the way in applying sound science-based approaches to the design and evaluation of programs, and the encouragement of public-private partnerships to be effective tools in changing the knowledge attitudes and behaviors of not only the public, but also for urban planners, workplaces, schools and food companies. By focusing on the desired outcome (solution), rather than the perceived problem, real progress can be made.

**Q:** As a long-standing Director and member of ILSI SEA Region's Executive Committee, you have led and guided the branch in its development. What is your vision for ILSI SEA Region as it seeks to further maximize its impact on public health?

**RB:** There are many other areas where ILSI SEA Region can make significant contribution by bringing together the key stakeholders:

- In public health to address issues of micronutrient deficiency through improved and affordable fortification technology and implementation, and in addressing the next wave of non-communicable diseases such as diabetes;
- In food safety, by increasing the effective use of risk assessment and management approaches, and the early identification and sharing of knowledge of potential new threats; and
- In the provision of affordable and available foods through the fostering of common approaches to the establishment of food standards, regulation and labeling thereby facilitating trade and reducing costs for food compliance.

## Training Regulators in Vietnam to Develop National Food Safety Standards

On April 7-8, 2010, ILSI SEA Region in collaboration with the Vietnam Food Administration (VFA) conducted a 2-day National Training Workshop on Development of Food Safety Standards to provide a practical training and hands-on experience for Vietnam regulators in the development of food safety standards. Held at the Horizon Hotel in Hanoi, Vietnam, the workshop was well attended by approximately 40 participants comprising VFA staff, provincial food officers, food industry representatives, as well as FAO and WHO representatives. The workshop emphasized on: understanding the principles behind standard-setting; finding data on toxicity and dietary exposure; using this data to determine the health risks; and examining the risk management options, with the emphasis on standard setting.



*Dr Dedi Fardiaz, Ms Jiraratana Thesasilpa, Ms Pauline Chan, Dr Peter Abbott and Mrs Boon Yee Yeong*

The workshop was opened by Ms Pauline Chan, Director of Scientific Programs at ILSI SEA Region, and Dr Nguyen Cong Khan, Director of Vietnam Food Administration. Dr Peter Abbott of Biosearch Consulting, Australia, and Dr Dedi Fardiaz of Bogor Agricultural University, Indonesia, each played a significant role by providing an overview of each session and facilitating the group discussion. Ms Jiraratana Thesasilpa of Thai Food and Drug Administration also contributed a presentation on the development of standards for special food categories. All sessions were conducted in English with Vietnamese translation for more effective learning.

### Workshop Sessions Exploring a Range of Food Safety Issues

After an initial discussion within the groups regarding food safety issues for Vietnam and the need for food standards (Session 1), the groups explored the Codex standards and searched for specific information using the example chemicals assigned to their group (Session 2). In the next session, the groups examined the risk analysis framework and studied the principles used to establish food standards by addressing questions related to the example

chemicals (Session 3). This was followed by exercises searching for toxicity data (Session 4) and food consumption data, as well as doing a simple dietary exposure calculation (Session 5). The groups then examined how this information is used to determine if there is a health risk (Session 6) and way in which food standards can help to manage the health risk (Session 7). In the final session, the specific problems associated with special food categories, such as infant foods, was examined (Session 8).

### Interactive Format

The format of the workshop was designed to give maximum opportunity to the participants to discuss food safety issues through application to specific examples of food additives and contaminants.



*Participants enjoying the interactive and hands-on exercises during the training workshop*

Each workshop session began with a short presentation providing the principles, assessment frameworks, data sources, methodology, etc, which was then followed by practical exercises. Participants were divided into four groups and were tasked to complete the exercise sheets. Because each group contained individuals with a range of knowledge and experience, they were able to develop a common understanding of the issues through discussion and to assist each other answering the questions and completing exercises. The groups worked enthusiastically on the exercises using the internet resources, database, and the background information provided. The presentations were well attended and there was good participation in the group discussion sessions.

### Recommendations

This workshop has been successful in assisting the VFA officers in developing food safety standards. The training workshop can also be useful in helping other ASEAN countries where food standards are being developed. It may also benefit the more developed ASEAN countries where there is always a need to train new staff in how to assess food safety issues and develop standards.

## Application of Codex Standards on Foods for Infants and Young Children in Indonesia

Codex Standards have been used as reference and basis for a number of regulations in

Indonesia, including Codex Standards on Foods Intended for Infants and Young Children. However, the understanding and interpretation of these standards sometimes vary between individuals and institutions. Thus, it is important to have a common understanding and interpretation of Codex Standards, the development process and scientific criteria behind the Standards and Guidelines among all stakeholders to facilitate the appropriate adoption and implementation in the country. In response, ILSI SEA Region and its Indonesia Country Committee together with the Indonesian Paediatric Society (IDAI) organized a Seminar and Roundtable Discussion on Understanding Codex Standards on Foods Intended for Infants and Young Children on April 28, 2010, at Mandarin Hotel, Jakarta. Opened by Ms Pauline Chan of ILSI SEA Region and Dr Badriul Hegar of IDAI, the seminar was attended by 80 participants representing pediatricians, government officials, health ministry, nutrition associations and food industries.

An overview and interpretation of the said Codex Standards was presented by Dr Jeronimas Maskeliunas of Joint FAO/WHO Food Standards Program, Italy. He first elaborated on the development process and scientific input to establish the standards, codes of practice, guidelines, and other related documents. He then listed some of Codex documents in the area of children's nutrition. For example, the Codex Standard for Infant Formula and Formulas for Special Medical Purposes Intended for Infants covers compositional, quality, safety, methods of analysis and labeling requirements of the product, but does not cover all substances found in breast milk. Addition of optional ingredients is permitted upon scientific demonstration of the suitability and safety; sufficient amount must be present to achieve the intended effect. He concluded that Codex standards, maximum residue limits, codes of practice and other recommendations are of advisory nature and form a considerable source of harmonized information for use by governments and food industry. National governments can make their own decisions, taking into account the assessment by risk assessors and scientists of the national agencies and institutions.

Ms Tetty Sihombing, Director for Food Product Standardization at National Agency for Drug and Food Control (BPOM), provided an overview of regulations in Indonesia governing

infant formula, follow on formula, and complementary foods. She outlined the standardization process in Indonesia and highlighted some of the national standards which are voluntary and the regulations which are mandatory. She also shared that the country's Regulation on Infant Formula and Infant Formula for Medical Purposes Control was developed using relevant Codex Standards as the main reference. Indonesia also has a National Standard for Follow on Formula and for Complementary Food of various types, which stipulates the quality, safety and labeling requirements. These are done to ensure that food for infants and young children are optimum for growth and development.

The seminar ended with a lively discussion moderated by Dr Dedi Fardiaz of Bogor Agricultural University and Dr Aman Bhakti Pulungan, a pediatrician of Cipto Mangunkusumo Hospital. The addition of optional ingredients was one of the issues raised, to which Dr Maskeliunas mentioned that national governments should make the decision on which optional ingredient to be allowed and the quantities allowed based on scientific evidence. While this is not an easy task, national authorities can take provisions from other regulations that are already in place. The task to determine suitability and safety requires extensive scientific opinion and this issue can be raised during Codex Committee on Nutrition and Foods for Special Dietary Uses (CCNFSDU) meetings.

He also clarified that nutrition and health claims for infant and young children are not allowed in current Codex guidelines. In response to the queries for possible milk standard for children above 3 years old, BPOM would require data that support the ability of milk and milk supplements to fill in the nutrient gap and provide the nutritional benefits before such a milk standard need to be set.

The roundtable discussion between BPOM, IDAI, ILSI SEA Region and Indonesian Nutrition and Dietetics Association (PERSAGI) representatives was chaired by Dr Dedi Fardiaz and facilitated by Dr Maskeliunas. The discussion clarified issues such as the definition of infant, young children and children, definition of premature and low birth weight babies, definition of complementary and formulated supplementary food. The group also discussed risk management options to reduce the risk of *E. Sakazakii* contamination in reconstituted powdered milk, including the temperature of water used for reconstitution. Dr Maskeliunas explained that under Codex Standards for Infant Formula, the essential and semi-essential amino acids in human milk are presented as a range of values as well as mean values based on different published studies. National governments may use them as reference to set up the national standards for amino acids content of infant formula

## Updates on Saturated and Trans Fats in Australia: Science, Regulations and Consumption Patterns



methods have become more sensitive and can detect a greater range of TFA in food, particularly ruminant TFAs. A revised report by FSANZ in 2009, showed a small reduction in mean TFA intake of 1.3g/day in Australia and 1.6g/day in NZ. This shows that TFA intakes in Australia and New Zealand are low relative to other countries. Dr Mackerras concluded by pointing out that because of the changes in survey and analytical methods over time, multiple analyses are necessary in order to improve the reliability of the data.

Dr Chakra Wijesundera, Principal Research Scientist from CSIRO presented data on the industrially-produced TFA in foods in Australia. Dr Wijesundera emphasized that there are no current restrictions on TFA in food in Australia. Ms Barbara Eden from the Heart Foundation gave a very comprehensive presentation on dietary fats, including SFA, Omega-3 and Omega-6 PUFAs, MUFA and TFA and their links to heart disease. She discussed the Heart Foundation's recommendations for adult Australians to consume less saturated and trans fats by replacing them with the healthier PUFA and MUFA. She also discussed the position that the Heart Foundation is bringing forward to the governments to set mandatory TFA labeling on foods in supermarkets and meals eaten out of home.

Prof Peter Clifton, of the Baker IDI Heart & Diabetes Institute and University of Adelaide, followed with a presentation of the most up-to-date data on the physiological impact of SFA and TFA intakes. He concluded that all types of TFA, both ruminant and industrial, elevate LDL cholesterol levels as do saturated fatty acids with the exception of stearic acid. In the case of the stearic acid, research to date shows that it has a neutral effect

**ILSI SEA Region's Australasia Country Office organized a Symposium on Saturated and Trans Fats : Where Do We Stand? on June 17, 2010 in Sydney, Australia. The focus was to bring forward the best available data on saturated and trans fat (SFA and TFA) from a consumption perspective, on the health issues, and to understand what is being done, can be done and the future challenges. The symposium was attended by over 110 scientists from Australian universities and research institutes and by food industry representatives, advocacy groups, government and regulatory bodies.**

Associate Professor Barbara Meyer from the University of Wollongong, presented a review of the fat intake in the Australian population based on data from the last National Nutrition Survey (NNS) in 1995 and indicated major food sources of saturated fat (SFA) in Australia are cereal based products and dishes (eg biscuits, cakes, pies, fried rice, pizza, quiche, croissants, pancakes etc), as well as milk products and meat. Comparing the NNS data for children aged 2-16 to the 2007 Australian National

Children's Nutrition and Physical Activity Survey Data, Prof Meyer pointed out that although total TFA and SFA were decreased, so were the monounsaturated (MUFA) and polyunsaturated fats (PUFA) in this latest survey.

Dr Dorothy Mackerras, Chief Public Health Nutrition Advisor for FSANZ, presented data on TFA consumption in Australia and New Zealand. The mean intake of TFA was estimated to be 1.4g/day in Australia and 1.7g/day in NZ (2006 data). Since then, analytical

on LDL cholesterol levels. Saturated fats have also a potent effect in raising HDL cholesterol, which TFA do not, even though it may be non-functional HDL; thus more research on this topic is needed.

Associate Prof David Cameron-Smith from Deakin University presented on the inflammatory responses that happen after a meal high in SFA and the role of inflammation in cardiovascular disease. Dr Russell Keast from the same university then presented some recent data on the evidence around the sixth taste; the fat taste which is mediated via fatty acids. Dr Keast reported on a study in people where fat taste sensitivity was established, and shared that a probable mechanism is through satiety response - if a person is orally sensitive most probably they are also sensitive in the gut. Dr Keast concluded that fat taste sensitivity may be associated with the development of overweight and obesity but more studies are required to fully understand the mechanisms.

Ms Coral Colyer from the Heart Foundation gave an informative presentation on the role of the "Tick" program in reducing SFA and TFA in the food supply. The Heart Foundation has been working with the food industry for 21 years to improve the nutritional profile of the food supply,



especially in relation to type of fat. It's mission is to influence food companies and outlets to create foods that meet the Heart Foundation's high nutrition standards, to encourage consumers to purchase healthier foods and influence food policy and legislation. The Heart Foundation also encourages the food industry to reformulate foods to reduce SFA and TFA by replacing with MUFA or PUFA and using ingredients with negligible TFA, but not at the expense of significantly increasing SFA.

Providing perspectives from the food industry were Mr Bruce Perkin from Yum! Restaurants International, Ms Megan Cobcroft from Unilever Australasia, Mr Chris Raworth from Mars Snackfoods and Mr Andrew Kennett

from Arnott's. Each of the industry speakers discussed their companies' initiatives and achievements in producing and offering healthier foods to consumers by reducing the amount of SFA and TFA in their products.

The symposium presentations generated many questions from the audience that were addressed during two lively panel discussion sessions. In summary, the symposium enabled a credible forum for the discussion of the most current findings on saturated and trans fat research and possible strategies to aid in reducing their use in the food supply and their intake in the general population. It also showed that there is still much to be learned from further research on this topic.



*Scientists, regulators and industry representatives who presented at the Symposium*

## Current Status of Food Fortification in the Philippines

**ILSI SEA Region Philippine Country Committee held a Symposium on Frontiers on Food Fortification: Where Are We Now? on March 25, 2010, at EDSA Shangri-la Hotel, Mandaluyong City. The objective of the Symposium was to provide a forum for discussing the latest trends in food fortification technology, the current status of the Sangkap Pinoy Seal (SPS) Program, and the progress of rice fortification in the Philippines. The Symposium was attended by more than 120 participants from academia, food industry, and government.**



Mr Hector Maglalang, a Food Fortification Specialist of USAID-AED A2Z Project, first described the various types of fortification programs, namely, mass fortification, targeted fortification, market driven fortification, household and community fortification, and biofortification, citing examples and objectives of each. Mr Maglalang then focused on the current trends in fortification with iron, vitamin A, iodine, zinc, B vitamins, vitamins C and D, calcium and selenium, giving his recommendations on the most feasible compounds and suitable food vehicles for these micronutrients, singly or in combination.

Ms Ma Evelyn Carpio of the Food and Drug Administration (FDA) discussed the status of the Sangkap Pinoy Seal (SPS) Program, a market-driven

voluntary fortification of commonly consumed foods with vitamin A, iron and/or iodine that has been in operation since 2000, together with the guidelines for the food industry and monitoring process. Ms Carpio cited data from the National Nutrition Survey of 2003, which showed the significant contribution of the SPS program to the retinol intake of preschool children, estimated at about 22% to 26% of their retinol intake.

The last speaker was Dr Imelda Agdeppa, an Assistant Scientist at the Food and Nutrition Research Institute (FNRI), who described the efforts of FNRI in pursuing rice fortification in the country, from laboratory scale production, to efficacy studies, market trial and commercialization. Laboratory trials using coating

and extrusion technologies with ferrous sulfate and micronized iron pyrophosphate, showed promise. The RCT study showed the effectiveness of either technology in improving the iron status of school children. Technology transfer to a private rice miller followed. The pilot scale commercialization of the iron-fortified rice was then implemented in the municipality of Orion, Bataan Province, with the help of the local government. The effectiveness study showed the positive result of the social marketing strategy and its use in improving iron status of mothers and 6-9 year old children. Dr Agdeppa concluded that, through public-private partnership, commercialization of iron-fortified rice is feasible and a province-wide rice fortification program is currently being planned.

**ILSI SEA Region organized a Seminar on Obesity, Bioenergetics and Cancer featuring a presentation by Prof John Milner of the National Cancer Institute, USA, that was attended by over 70 participants from academia, government agencies, hospitals and food industries. The seminar was organized in collaboration with the Life Science Institute Toxicology Programme of the National University of Singapore as well as the Singapore Nutrition and Dietetics Association. The seminar was held at NUS Centre for Life Sciences on February 26, 2010**

## Exploring the Links between Obesity, Bioenergetics and Cancer

Prof Milner started the seminar by sharing on the rising obesity incidence and related disease conditions, including cardiovascular disease, type 2 diabetes, hypertension and cancer. Obesity and body fatness have also been linked with increased risk and mortality of certain cancers, and there is a need to break the links between obesity and ill-health. To achieve this goal, it is key to measure the

significance of multiple, and sometimes subtle, bioenergetic changes and to develop appropriate strategies for their manipulation.

Genetic and environmental factors are recognized to shepherd the unevenness between caloric intake and energy expenditure that ultimately determines energy storage and disease linkages. Genetics can influence our

response to diet and even influence our food preferences and dietary habits. On the other hand, food can also influence epigenetic processes, and bioactive food components may play a role in modifying the processes involved in disease pathogenesis. Prof Milner concluded that harnessing this information into effective personalized strategies is of paramount importance as one size indeed does not fit all.

## ILSI SEA Region President Receives Award



Mr Geoffrey Smith, President of ILSI SEA Region, received a **Flour Fortification Initiative (FFI) leadership award** for his work to reduce iron deficiency anaemia from the chair of the FFI Executive Management Team at the First Asia Pacific District Meeting and FFI workshop, August, Thailand. He was recognized for his tireless global effort over a course of 15 years to make available sodium iron EDTA available for human consumption. Sodium iron EDTA is in a form highly bioavailable to human body and is now recommended by leading scientists and global health organization as the best form of iron for fortifying high extraction flours and condiments such as soy sauce and fish sauce for improvement of iron status.

## Publication

Meeting Report: Symposium on Plant Polyphenols - Nutrition, Health and Innovations, June 2009  
***Nutrition Reviews*, 2010;  
 68 (4): 246-252.**

A Meeting Report of ILSI SEA Region's Symposium on Plant Polyphenols: Nutrition, Health and Innovations held on June 22-23, 2009, in Kuala Lumpur, Malaysia has been published in the **April 2010** issue of the journal ***Nutrition Reviews***. The symposium provided a timely update of research on plant polyphenols in relation to their nutritive and health properties. Presentations covered polyphenols from a wide range of food sources such as tea, coffee, nuts and seeds, cocoa and chocolate, soy, and Asian fruits, vegetables, and spices. Protective effects of polyphenols in chronic diseases such as cardiovascular disease and cancer were highlighted in this symposium together with the development of innovative polyphenol-containing food products. Issues related to claims regulation and consumer education were also discussed. This meeting report shared some of the highlights and important information from the symposium.

An abstract of the publication is available at [www.ils.org/SEA\\_Region](http://www.ils.org/SEA_Region)



## Calendar of Regional Activities and Programs 2010

## 3rd Quarter 2010

Seminar and Workshop on Nutrition Labeling, Claims and Communication Strategies for the Consumer  
 September 20 – 21, 2010, Kuala Lumpur, Malaysia

Science and Regulatory Perspectives on Stacked Events in Genetically-Modified Crops  
 September 20 -21, 2010, Bangkok, Thailand  
 September 22- 23, 2010, Jakarta, Indonesia

## 4th Quarter 2010

Symposium on Nutrition and Cognition - Towards Research and Application for Different Life Stages  
 October 19 – 21, 2010, Malaysia

Dietary Fiber Seminar and Training Workshop  
 November 2010, Thailand (TBC)

RDA and FBDG Roundtable Discussion  
 November 12, 2010, Thailand

2nd Infant and Young Child Nutrition Expert Consultation  
 November 16 – 17, 2010, Philippines

9th ASEAN Food Safety Standards Harmonization Workshop  
 December 6 – 7, 2010, Singapore (TBC)

### Symposium On Nutrition and Cognition



Can what we eat affect the development of our brain and our cognitive functions? Advances in research have increasingly shown that nutrition may play a crucial role not only in the physiological development of our brain even before birth, but also the development of our cognitive functions, mental performance and behavior throughout life.

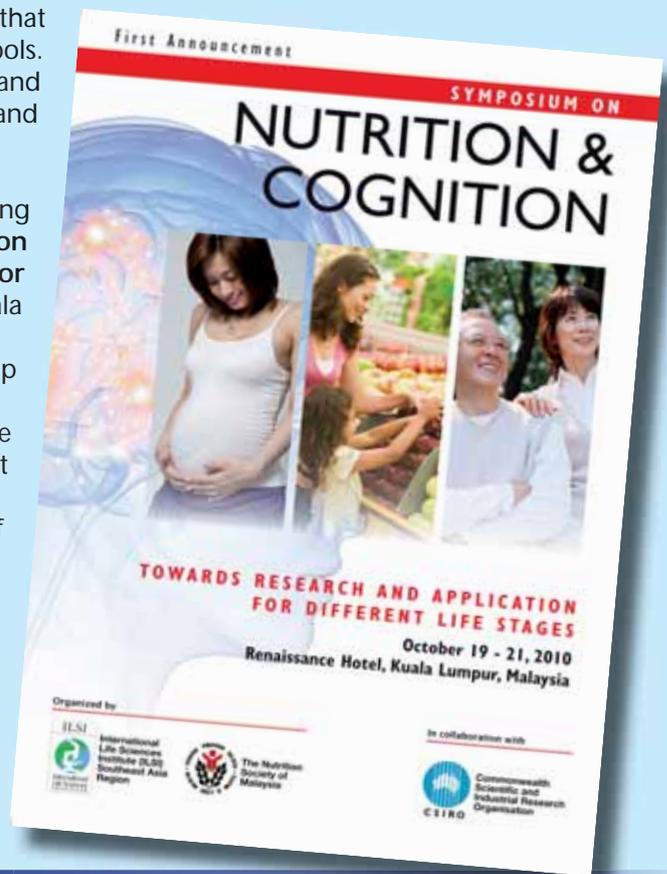
The potential for nutrition intervention to influence cognitive development from prenatal conception to cognitive performance at the later life stages is of great interest to researchers, food and beverage producers as well as consumers. In this respect, there is the need to establish evidence-based benefits of nutrients

and food components for optimizing cognitive functions that can be substantiated through appropriate assessments tools. However, despite the wide availability of methodologies and tools, many gaps and challenges remain in detecting and validating nutritional influences on cognitive functions.

To address these issues, ILSI SEA Region is organizing a comprehensive 2 1/2-day **Symposium on Nutrition & Cognition: Towards Research and Application for Different Life Stages** from October 19 – 21, 2010 in Kuala Lumpur Malaysia to:

- Share the state-of-the-art knowledge on the relationship between nutrition and cognition
- Highlight current methodologies in assessing cognitive functions, and explore their applicability for different population groups and life stages
- Discuss issues relating to scientific substantiation of cognition related claims
- Consider consumer understanding of nutritional influences on cognition

This Symposium will bring together scientists, researchers and experts in an exciting forum to initiate discussion, advance understanding, spur research and inspire applications, with specific focus on Asian populations.



Visit [http://www.ilsa.org/SEA\\_Region/Pages/NutritionCognition.aspx](http://www.ilsa.org/SEA_Region/Pages/NutritionCognition.aspx) for more details on the Symposium's Program, Exhibit and Registration.

Or, email the Symposium Secretariat at [nutritioncognition@ilsisea.org.sg](mailto:nutritioncognition@ilsisea.org.sg)

Visit us at [www.ilsa.org](http://www.ilsa.org) to find out more about our upcoming activities and programs.



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