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ILSI Japan General Assembly was held February 17th

ILSI Japan held its 2009 General Assembly on February 17th (Tuesday, 2PM) at Showa Women's University in the large meeting room. The meeting commenced with 56 members attending (29 in person and 27 by proxy) of the 81 total committee members. Measures one to five (the transfer of responsibility for the election of trustees from the general assembly to the board of trustees in accordance with the increased number of trustees (15) and in order to facilitate the prompt election of trustees) were approved. There was also a call for cooperation and assistance with planning for the *Sixth Nutrition and Aging Conference* to be held as part of the activities related to ILSI Japan's 30th Anniversary.

Other noteworthy items:

- 1) The official report from the General Assembly
- 2) The ILSI Japan Endowed Chair at the University of Tokyo
- 3) The ILSI Research Foundation

The Director of the ILSI Research Foundation, Dr. Takeshi Kimura, called for funds for the ILSI Research Foundation and for support of the Global Threshold Project.

The 4th ILSI Japan Life Science Symposium "Debriefing Session of Japanese Dietary Habit and Obesity Task Force"

: By ILSI Japan

The 4th ILSI Japan Life Science Symposium and was held following the ILSI Japan 2009 General Assembly, on Feb. 17, 2009 (Tuesday 13:00-18:00) at the Showa Women's University.

This year, the Japanese Diet and Obesity Task Force (under the control of ILSI Japan's Nutrition and Health Research Committee) presented the following program centered on the relationship between the Japanese Diet and Obesity.

The presentations were separated into 3 groups and 3 years of research activities were presented. 150 people attended and a lively discussion was taken place.

< Program >

13:00-13:20

Opening Remarks

Prof. Shuhei Kobayashi

(Vice-president ILSI Japan, University of Human Arts and Sciences,
School of Human Sciences, Department of Health and Nutrition)

13:20-13:30

Introductions from the group leader

Ryuji Yamaguchi (Ajinomoto Co., Inc.)

Report from "Dietary Fats Working Group"

13:30-13:55

"The relationship between obesity and fat intake in Japanese diet"

Yukihisa Tanaka

(NOF CORPORATION)

13:55-14:40

"Nutrition and longevity in

Japan - from a fat intake view-



point”

Prof. Hiroshi Shibata

(Obirin University Graduate School,

Human Development and Aging Research Institute.)

Report from “Variety of Traditional Fermented Foods Working Group”

14:50-15:15

“The relationship between variety of Japanese fermented foods and health - focused on obesity”

Kazuyo Kouno (Ajinomoto Foundation for Dietary Culture)



15:15-16:00

“Japanese traditional fermented food and health effect of lactic acid bacteria in Japan”

Prof. Sanae Okada

(Faculty of Applied Bio-Science, Tokyo University of Agriculture)

Report from “Pattern of Dietary Intake Working Group”

16:10-16:35

“Is there an association between the low obesity rate in Japan

and the low consumption of sugar-sweetened beverages?”

Naoki Midoh (Knorr Foods Co., Ltd.)

16:35-17:00

“Relationship between dietary rhythm and obesity in middle-aged Japanese men - THE INTERMAP STUDY AMONG JAPANESE MIDDLE-AGED MEN - ”

Yuko Miyake (Ajinomoto Co., Inc.)

17:00-17:45

“Possibility and challenges of nutritional epidemiology – Aim at factor analysis of obesity – ”

Akira Okayama M.D.

(Head, The First Institute for Health Promotion and Health Care, JATA)

17:45-17:55

General Discussion

17:55

Closing Remarks

Prof. Shuichi Kimura

(President, ILSI Japan, Graduate School of Human Life Sciences, Showa Women’s University)



Japan-US Symposium

Function of Food Components-Report of Japan and the US

Sponsors : ILSI Japan, Japan Health Food and Nutrition Food Association, Japan Nutritional Foods Association of Japan.

Assistance: National Institute of Nutrition

The Japan-US Symposium sponsored by ILSI Japan, Japan Health Food and Nutrition Food Association and the Japan Nutritional Foods Association of Japan with the assistance of the National Institute of Nutrition was held on Dec. 3, 2008 (Wednesday) 13:30-17:00, at Fiore Tokyo. The theme was “Function of Food Components-Report of Japan and the US”, and included presentations and discussions by Dr. Paul M. Coates, Director, Office of Dietary Supplements, NIH, USA, Dr. Shoichiro Tsugane, Prevention Research Section Leader, National Cancer Center, Dr. Keiko Ishimi, Biological Guidelines Project Leader, National Institute of Nutrition and the program is given below.

<Program>

“The Current State of Health Claim Labeling and Human Clinical Trials on Supplements in the US”

Dr. Paul M. Coates, Director, Office of Dietary Supplements, NIH, USA

“Food Components and Cancer: Current Evidence on Japanese Through Observational Studies”

Dr. Shoichiro Tsugane, Prevention Research Section Leader, National Cancer Center

“Food Components and Osteoporosis Prevention”

Dr. Keiko Ishimi, Biological Guidelines Project Leader, National Institute of Nutrition

Hereby present the summary of lecture by Dr. Shoichiro Tsugane.

Food Components and Cancer : Current Evidence on Japanese Through Observational Studies

*Shoichiro Tsugane, M.D.
Chief, Epidemiology and Prevention Division
Research Center for Cancer Prevention and Screening
National Cancer Center*

Summary

The associations between modifiable risk/protective factors and cancer should be firstly assessed for its causality (hazard identification) to establish effective cancer prevention strategy. Its evaluation should be based on systematic reviews for evidence from epidemiological studies as well as other relevant data from animal models and in vitro experiments. We have evidence-

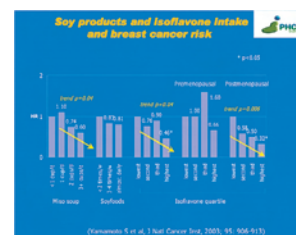
based recommendations on highlighting highly probable factors provided by international agencies and evaluations (risk assessment) based on evidence among Japanese population (considering real situations of risk/protective factor exposure).

Cancer-specific diet-related recommendations for Japanese cited so far are moderate alcohol drinking if any, physical exercise,

optimal weight maintenance, low salt, intake of fruit and vegetables and restriction of processed and red meats. There are currently various foods and nutrients with potential for cancer prevention and without sufficient evidence, such as dietary fiber, coffee, green tea and isoflavones.

A body of evidence from large-scale placebo-controlled double-blinded randomized controlled trials showed that supplementations of anti-oxidant nutrients such as beta-carotene, vitamin E, vitamin C and selenium were not effective to reduce the subsequent cancer incidence with some exceptions. The evidence

from epidemiological studies shows that the dose-relationship between intake of potentially preventive agent and risk reduction is not always linear. Development of effective cancer prevention strategy considering dose-response relationship, intake assessment and evidence of absolute risk (if any) -benefit balance from epidemiological studies are warranted.



Benefit-Risk Analysis of Foods (BRAFO) Seminar

Sponsors : ILSI Japan Functional Food Research Group

On March 13, 2009, the Functional Food Research Group sponsored a seminar at the National Institute of Health and Nutrition. In conjunction with Benefit-Risk Analysis of Foods (BRAFO) Project, Dr. Herve Nordmann, Director of the Industry Council for Development, spoke on the experience in the European Union with maximizing nutrition. In the European Union, to date three projects have been completed with the guidance and funding of ILSI Europe: Risk Assessment of Chemicals in Food Task Force, Functional Foods Task Force, and Process for the Assessment of Scientific Support for Claims on Foods (PASSCLAIM). Many scientists from government, national research institutes, universities and industry participated in each of these projects and the results greatly contributed to European Union decisions and policies on food safety and the

promotion of health maintenance. After more than 10 years of work on the above projects, in 2006 the EU finally made public rules for nutrition and health claims.

In 2007, ILSI-Europe began the next phase of work in this area, with the start of the BRAFO Project. In order to develop objective framework for standard methods for governments to use for comparison of the benefits and risks of foods and food components, national research institutes (Germany, The Netherlands, etc.) partnered with ILSI-Europe. In addition to the specific results of the project, a strong impression that extremely important mutual understanding and networks were formed by collaborating on this project.

Review

What is the optimal nutrition for an individual with genetic polymorphisms?

: By Yasuo Kagawa, Ph.D.
Vice President, Kagawa Nutrition University



Summary

The author is on the editorial board of the Japanese edition of "Nutrition Reviews" published by ILSI Japan, which focuses on scientific input related to nutrition and physical activity, food safety, chemical risk assessment and environmental health. In short, ILSI provides people with information on optimal nutrition, which is wider in scope than recommended dietary allowance (RDA). RDA is based on the estimated average requirement (EAR: the intake simply sufficient to satisfy the needs of 50% of the subjects and the standard deviation (SD) obtained by balancing studies on large numbers of subjects. Therefore, RDA (defined as EAR+2SD) is intended to cover the nutritional

requirements of 97.5% of subjects. However, optimal nutrition covers wider scope than RDA due to the following 4 reasons.

1. Polymorphism and predictability :

The statistics of the RDAs assumes nearly normal distribution of the data, which is not always true in populations composed of many genetic polymorphisms. For example, the guideline recommends ethanol intake <20g/day, but some people become intoxicated by only 1g/day, while others can drink 200g/day without significant impaired performance. Optimal personalized

nutrition based on polymorphism enables not only appropriate treatment but also prediction of the risk for prophylaxis. C677T-TT, an SNP of MTHFR found among 15% of the population, is associated with a 3.5-fold higher risk for stroke as compared to the wild type, and for TT, 400 μ g folate acid/day are needed, instead of RDA (240 μ g).

2. Long-term gene expression and bioactive substances:

Development of a lifestyle-related disease is the result of long-term gene expression, but RDA is based on short-term balance studies. Optimal nutrition is based on long-term follow-up studies, and includes bioactive substances such as anticancer or hypotensive agents in functional foods, while RDA does not. The effects of functional foods must be established by analyzing gene expression. Enzyme synthesis decreases with age, so nutrients may be administered in semi-digested form. Large ethnic differences of the effects of bioactive substances, lactose, etc. must be considered in optimal nutrition.

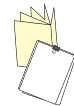
3. Mental activity is supported by both clock and personality genes.

RDA is determined by physical activity, but human optimal

nutrition aims to optimize mental activity also. For this, the genes for both circadian activity and personality are important. RDA does not specify the timing of meals, but central and peripheral clock genes are regulated by morning light and breakfast. Human nutritional expenditure is governed by the cortex, which can be activated by many bioactive substances including caffeine. Folate and n-3 fatty acids are effective in the prevention of dementia and depression.

4. People are voluntary agents and have individual goals:

The final target of personalized optimal nutrition is the individual's goal. Human beings do not simply live in order to prolong life spans by following uniform RDA guidelines. For example, some sports produce harmful reactive oxygen species. To counteract this, several preventive substances may be used in order to attain optimal nutrition. Genome-wide association studies on 1,000,000 polymorphisms are used to determine optimal personalized nutrition.



Activities of CHP ~Project SWAN~

Project SWAN (Safe Water and Nutrition) in Vietnam, conducted by ILSI Japan CHP and the National Institute of Nutrition (NIN), Vietnam with the Grassroots Partner Project Fund from the Japan International Cooperation Agency (JICA) completed its three year project in November 2008. This report summarizes the community based-participatory activities and outcomes of Project SWAN.

< Background >

WHO has reported that 1.1 billion people do not have access to safe drinking water, in many developing countries the intake of unsafe water and unhygienic environments cause diarrhea and infectious diseases in children. This interferes with the intake of necessary nutrients, resulting in malnutrition. In Vietnam, access to safe water is still a prioritized public health issue. Only about 3% of rural households in Vietnam are supplied with water that meets the National Drinking Water Hygiene Standard (Ministry of Health, Vietnam, 2002).

< Framework and Objectives >

Under these circumstances, in order to secure safe water in rural areas where there will be no public water works available in foreseeable future, Project SWAN aimed to establish sustainable water supplies and health management models in rural and suburban areas. The goal was to accomplish this through a participatory approach with the inhabitants by 1) enhancing the knowledge of drinking water, food safety and nutrition at the household level, 2) optimizing the operation of water treatment

facilities and supplies of safe water, and 3) establishing effective management systems to enable the sustainability of community based participatory approaches.

The project was composed of two programs; the IEC (Information, Education and Communication) Program worked to share information with the inhabitants on improving water management in households, food safety and nutrition, and the Technical Program worked to improve water quality at water treatment facilities (WTFs) through their renovation and to provide technical assistance for the operation of WTFs.

In November 2005, the SWAN Project was started in three communities (Tam Hiep-Hanoi, Dai Mo-Hanoi, Quang Trung-Nam Dinh) in Red River Delta Region of Vietnam.

< IEC Program >

In the first half of the project, the program aimed to increase the awareness and knowledge of the inhabitants about the water treatment process, clean water, water management by the Water Management Union (WMU*), food safety and nutrition in the context

of a participatory approach. The SWAN Project issued newsletters and organized workshops, a drawing contest for school children and a poem contest for adults. In the second half of the project, the program worked to promote the self-reliance of the community. We conducted training sessions to improve the communication skills of WMU members and developed sustainable IEC systems. In order to examine the effectiveness of the program over 3 years, a study was designed in the context of an intervention study. We developed a questionnaire based on a literature review and focus group discussions and carried out surveys including around 200 mothers and their children from 6 months to 4 years old.

*WMU : Leader of village or commune, Vice-leader of village or commune, operators, village health workers, health staff

〈 Technical Program 〉

To achieve a sustainable water supply by optimizing the operation of the WTF, we conducted the following technical activities: 1) problem identification at the WTF and personnel capacity, 2) planning renovation based on local needs, 3) modification of the WTF, 4) technical training for WMU members, 5) distribution of operation manuals and instructions on keeping operation records, and 6) instruction about detection methods for water loss and related countermeasures.

〈 Outcomes 〉

As a result of the above activities, the knowledge of the inhabitants about safe water, food safety and nutrition have been improved and the incidence of childhood diarrhea and underweight has decreased. We confirmed that the water quality has improved and now meets national standards following renovation of the WTF. Furthermore, the number of households that receive treated water and the water volume (L/capita/day) have increased. Also, the satisfaction of inhabitants with clean water and the water management has increased.

The project was implemented through a participatory approach and we utilized existing personnel and equipment in the local areas. Therefore knowledge and habits related to improved water treatment practices, water management skills and IEC activities were passed to local inhabitants during project.



In the first half of the project, project team (ILSI and NIN) led the activities, but from the second half of the project, the project team remained in a support role. Together with the efforts of inhabitants, the WMU led the activities in local areas. This approach ensured the sustainability of the WMU. We also established a sound water fee collection system and carried out measures to reduce water loss. This led to an increase the revenue of the WMU and the additional revenue was able to be allocated to the maintenance of the WTF, the salaries of WMU members, purchase of chemicals, and personnel costs of IEC activities. This has ensured the financial independence of the WMU.

Furthermore, the WMU members at the project site became local consultants for other villages and started promoting the expertise learned from Project SWAN.

For tackling safe water supply issues in developing countries, improvement of water quality alone is not the complete solution for communities. Appropriate operation of the WTF and a safe water supply allows inhabitants to drink safe water and use it for home cooking. Ensuring food safety in the home has been shown to be closely related to the prevention of diarrhea and malnutrition and is also directly associated to overall improved public health. Thus Project SWAN successfully combined IEC activities and water quality improvements, which are totally different areas of expertise, in a way which was easily understood by the inhabitants. The two activities thus became two wheels of the same cart, both supporting a common overall goal. This led to a great success.

The experiences of Project SWAN should serve as an excellent example for similar future projects.

Although Project SWAN was completed in November 2008, from November 2008 to March 2009, with the funding from the Japanese Ministry of Foreign Affairs, we have been evaluating the prospects for expanding the three-year project and have been developing a final report to disseminate results of the project to the general public.





2009 ILSI Annual Meeting : Jan. 16-22, 2009 Tucson, Arizona

The 2009 ILSI Annual Meeting was held Jan 16th (Friday) to Jan. 22nd (Thursday) in Tucson, Arizona, USA. Eight members of ILSI Japan and 2 members of HESI (Health and Environmental Science Institute, ILSI) attended.



Branch Staff Meeting : Jan 16th (Friday 8 : 00-16 : 00)

Although at past meetings the members have divided into groups, this year all members jointly attended sessions on the "Code of Ethics", "Communications", "Functional Foods", "Biotechnology" and "Obesity", after which a planning and discussion session was held.

ILSI Assembly of Members : Jan. 18th (Sunday 14 : 00-15 : 00)

From this year, the 2 year chairmanship of ILSI will pass from Mr. John Ruff (Kraft) to Dr. Michael Knowles (Coca Cola), making it two consecutive chairmanships from industry. There was also a change on the board of directors with Mr. Hiroyuki Ishii (Ajinomoto) retiring and the addition of Dr. Tamotsu Kuwata (Meiji Dairies). Dr. Takeshi Kimura (Ajinomoto) was the Director of the ILSI Research Foundation (RF) following numerous recommendations.

The report on the accounts of ILSI, ILSI branches and the ILSI RF showed that due to the subprime loan crises in the United States, the surplus of 2.5 million dollars in 2007 turned in to a deficit of 4.8 million in 2008. For 2009, a small surplus of 200,000 is projected resulting in an overall deficit in accounts. Therefore, this year is also expected to be difficult financially.

ILSI Japan Breakfast Meeting : Jan. 20th (Tuesday 15 : 00-16 : 30)

There was a slide presentation of the activities of 2008 and the plans for 2009. Even though it was an early meeting and only a simple breakfast, about 30 people attended and all of the prepared handouts were quickly taken up.

Of special note were introductory presentations on the Endowed Chair at Tokyo University for Functional Food and the Toxicology Chair sponsored by the Food Microorganisms Task Force and Food Risk Research Task Force. Activities of ILSI Japan (the "Obesity and the Japanese Lifestyle" study group, and CHP, PAN, IDEA, SWAN projects) were also presented.

Update from the ILSI Japan office:

We would like to announce that Mr. Shuji Iwata started work at ILSI Japan as of April 1, 2009.

In relation to ILSI Japan's goals for the future and strategic development, Mr. Iwata will serve as the Director of the Food Safety Research Committee, and be responsible for both the Food Safety Committee (which includes the Safety Information Research Task Force, the Food Allergy Task Force, the Biotechnology Task Force, the Risk Assessment Task Force and the Flavour Task Force) and the International Cooperation Committee. Mr. Kazuo Sueki, will serve as the Director of Scientific Information which includes responsibilities for the Biotechnology Study Group, the Food Function Study Group, as well as other scientific information study groups.

Editor's postscript

Located only about 50 meters from New York's Carnegie Hall is famous sandwich shop where the sandwiches are very large and there is space for the customers to eat-in. After attending a concert, I was not overly hungry, but I still wanted to check on not only the large sandwiches I had heard about, but also American portion sizes. I only ordered a beer and a salad, but the large amount of food I received was enough to confirm my Japanese concerns about excessive American portion sizes. As obesity is already a research theme for ILSI, wouldn't a good starting point be to encourage restaurants and cafes to reduce portion sizes?

ILSI Japan Newsletter

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