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8 Editorial Postscript

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The number of presentations and visitors reached the highest ever.

The International Congress on Nutrition and Integrative Medicine, previously called the International Symposium of AHCC Research Association, was held as the international symposium for the use of functional foods in integrated medicine on the 24th (Sat.) and 25th (Sun.) of July at the Royton Sapporo Hotel (Sapporo City).

Opening with a keynote lecture by Dr. John Milner of the National Cancer Institute (NCI) in the United States, the highest number of presentations was delivered including oral presentations on basic research (12 subjects) and clinical research (10 subjects), and poster presentations on basic research (11 subjects) and clinical research (10 subjects). The Congress attracted over 350 visitors, which is at a record high.

The keynote lecture by Dr. John Milner

In his keynote lecture, “Nutrigenomics and Cancer Prevention,” Dr. John Milner indicated that a risk factor for developing cancer is the interaction among the excess intake of calories, harmful microorganisms, viruses and environmental stress such as environmental pollutants and nutrients, and above all, diet should be regarded as what affect cancer mostly and to reduce the risk of cancer, both essential nutrients and non-essential components in foods are involved. Biomarkers are useful for understanding the roles of food, and metabolomics profiles provide a reliable key to understanding the frequency of food intake. For effects of food composition, effect biomarkers and sensitivity biomarkers are useful, and these three types of biomarkers are required to understand the interaction among food compositions and the significance of the interaction between food compositions and genes. There is plenty of evidence to demonstrate that meals change biological responses. We need to know the ‘-omics’ of food compositions, namely gene expressions and their phenotypes, and how they relate to reactions. Alternation in epigenetic and genetic function should also be considered. As for downstream events, there are proteomics and metabolomics and they also modify the whole phenotypes. Dr. John Milner explained about these topics with related data. In the questions and answers after his lecture, topics such as appropriate nutritious supplements according to age and physical frame, and the necessity for supplement intake were actively discussed.

Announcement based on the fellowship recognition program

At the reception after the International Congress held on the 24th, the awardees of the fellowship recognition program (introduced since last year) were announced. “A Study of the Efficacy of Active Hexose Correlated Compound (AHCC) in the Treatment of Chronic Hepatitis C Patients at Phramongkutklao Hospital” by Dr. Anuchit Chutaputhi (Phramongkutklao Hospital, Thailand), was selected for the Best Research Presentation Award (the Director-General Award of the Hokkaido Bureau of Economy, Trade and Industry, the Ministry of Economy, Trade and Industry). Although the efficacy of AHCC for hepatitis and hepatic function has often been discussed, this is the first
research to evaluate the efficacy with a thoroughly designed clinical trial and thus was selected for the award. Furthermore, for the Young Investigator Award by the President of AHCC Research Association, Dr. Takuya Sakurai, the Department of Molecular Predictive Medicine and Sport Science, Kyorin University, School of Medicine (the subject of presentation: "Both Oligonol and Exercise Have Preventive Effects on Cognitive Impairment in Senescence–Accelerated Mice"), and for the Best Poster Presentation Award, Dr. Chan Hum Park, the Institute of Natural Medicine, the University of Toyama (the subject of presentation: "Hypolipidemic and Antioxidative Effects of Oligonol Derived from Lychee Fruit on Renal Damage in Type 2 Diabetic Mice") were awarded respectively.

Introduction of the Best Case Series Program
In the general discussion after lectures held on the 25th, topics regarding the importance of accumulating evidence related to the functions of food and the legal framework required for enabling consumers to recognize the evidence were provided. First, Dr. Satoshi Ohno (the Translational Research Center*, Saitama Medical University International Medical Center) introduced the activity of the study group "the Best Case Series Program" in which investigative research on eligible patients in alternative healthcare for cancer is conducted with a Grant-in-Aid for Cancer Research from the Ministry of Health, Labour and Welfare. This activity is the Japanese version of "the Best Case Series Program," which has been conducted by NCI in the United States. The Ministry of Health, Labour and Welfare has already conducted research on a literature basis to evaluate the degree of scientific evidence of supplements that are used as complimentary alternative healthcare or comprehensive medical care. However, this activity aims to accumulate case reports of supplements including the amount of intake, duration and diagnostic data of efficacy. The difference with the activity by NCI is that they accumulate information on not only the complete response but also the partial response, stable disease and improved QOL, as long as these are objectively assessable. Part of their aim is to make a plan for a clinical trial based on the accumulated information making a database.

Mr. Akhiro Kurishita, Managing Director, Shinsyokuhin / Kinouseisyokuhin to

Nourinchikus ingeniousy wo Katarukai (The Discussion Panel of New Food/Functional Food and Agriculture, Forestry, Husbandry and Fisheries) explained how supplemental products, which stand between food and medical products, are legally categorized from foods, and from the perspective of health insurance, as well as the regulations in other countries. Supplemental products are categorized as dietary supplements in the United States, food in China and complementary medicine in Australia. Although supplements are defined in related regulations in the United States, China, South Korea, Australia and EU countries respectively, in Japan their legal position is not clear. So Japan is conservative when it comes to the legal framework and does not follow international standards.

Finally
After these topics were covered by two lecturers, the discussion got as far as the quality of clinical trials required as evidence for functional foods. In order to show the functionality of food, well-controlled human clinical trials are required and therefore the development of legal systems that enable evaluation at multiple facilities, and collaborative trials by cooperation among industry, academia, and government are also necessary. Clarification of the legal position and health claims on functional food are desirable in order to inform consumers of accurate accumulated scientific evidence from food and use functional food in current medical practice.

No conclusion was reached in this general discussion, but it was agreed to continue the discussion on these topics further in the following Congress.

*Dr. Satoshi Ohno currently belongs to the Consolidated Research Institute for Advanced Science and Medical Care, Waseda University (as of October)
ESPEN 2010 took place

The European Society for Clinical Nutrition and Metabolism, ESPEN 2010 (the 32nd ESPEN Congress) was held between the 5th (Sun.) and 8th (Wed.) of September in Nice, France.

In this Congress, study groups from Michigan State University, Teikyo Heisei University and Ritsumeikan University gave presentations respectively.

Educational lectures were delivered on “aging and nutrition” and “malignant condition (cancer) and nutrition” in the Congress.

As for aging, first the definition of aging within a human life cycle was discussed from the epidemiological perspective, and then the role of nutrients against aging was described. Muscular weakness often appears as a sign of aging and presentations focusing on the efficient intake of protein and amino acid were given.

Regarding the malignant condition (cancer), as conventional findings in the enteral alimentation field show, improvement of cachexia-derived QOL deterioration by supplying α-3 oil and nucleic acid (RNA) was described.

The beefsteak plant and AHCC (fungus origin) are not major subject matters in the clinical enteral alimentation field, but as we continued to attend this Congress, name recognition seemed to be increasing among specialists at the poster session.
**ISNFF Annual Conference 2010 took place**

Amino Up Chemical Co., Ltd. received the “Industry Merit Award of the ISNFF”

The International Society for Nutraceuticals & Functional Foods (ISNFF) held the annual international conference “the International Conference, Exhibition & Short Course on Nutraceuticals & Functional Foods” between 11th (Mon.) and 15th (Fri.) of October at Inna Grand Bali Beach Hotel (Sanur, Bali) in Indonesia, where great nature, tradition and culture attract many tourists worldwide.

This outstanding Conference was held involving researchers and companies from all over the world that study the functionality of food from different view points. Presenters came from over 20 countries and all the presentations were delivered in English. On the 11th and 12th, the leading researchers in this field gave a variety of lectures as short courses on the basic idea of functional foods and different ingredients, major research fields and regulations related to the functional foods in different countries. From the 13th onwards, oral presentations (126) and poster presentations (175) were given.

Dr. Young-Joon Suh (Seoul National University) explained the cellular defence mechanism of polyphenols, resveratrol, against oxidant stress and the involvement of resveratrol in the synthesis of novel antioxidant enzymes. Furthermore, Dr. Kohei Homma (Amino Up Chemical Co., Ltd.) explained that oligonols, lychee-derived low molecular polyphenols, accelerate the metabolism of fat. Dr. Robert M. Hackman (University of California, Davis) also gave a comprehensive luncheon seminar on oligonols and presented his findings. In addition, he also explained the safety of AHCC and described the large numbers of researches conducted on AHCC, focusing on immune regulation, the reduction of side-effects of chemotherapy, the improvement of hepatic function and its function as a probiotic. Moreover, Dr. Kenji Sato (Kyoto Prefectural University) described the attempt to identify the active constituent in the anti-inflammatory effect induced by AHCC. Dr. Makoto Shimizu (The University of Tokyo) gave a comprehensive presentation on the current situation of functional foods in Japan, in which he gave an exhaustive introduction on a scheme of food for specified health use and new categories that might be approved in the future.

In the Conference, Amino Up Chemical Co., Ltd. received “Industry Merit Award of the ISNFF” for their research achievement and innovative products.

Next annual ISNFF Conference 2011 is to be held between the 14th (Mon.) and 17th (Wed.) of November 2011 in Sapporo City, Hokkaido with Dr. Kazuo Miyazaki (Hokkaido University) playing a central part.
Innovation Japan 2010 – University Trade Fair

"Innovation Japan 2010 – University Trade Fair," which serves as a platform to connect the business community and universities is now in its 7th year, and was held at Tokyo International Forum. Persons in charge of the research and development, business managers and marketers from companies, and persons involved in universities and researchers participated.

There were a total of 17,853 visitors in three days, from the 29th of September to the 1st of October. Dr. Mikio Nishizawa (College of Life Sciences, Ritsumeikan University), who has delivered his presentations at AHCC Research Association Congresses numerous times, released technology seeds related to the posttranscriptional expression modulation through the antisense transcript of iNOS mRNA that were found from the research on the action mechanism of anti-inflammation induced by AHCC in hepatic cells. From the group from the surgery course of Kansai Medical University, Dr. Masaki Kaibori presented "Implanted long-acting analgesic gel for pain relief after surgery."

Bio Japan 2010 : World Business Forum

Bio Japan, which is held annually and aims to be "the largest place for realizing open innovation" in Japan, was held with four main themes, "Health," "The environment," "Food" and "Bio clusters & ventures" at the Pacífico Yokohama for three days from the 29th of September. As many as 15,175 people visited the exhibition.

At the venue, the Association hosted the sponsor summit titled "Food Summit : Science and Regulation of Health Foods and Functional Foods, and Issues toward Development of Industry" with "food" and "health" as main themes. Dr. Toshio Shimizu (Nagoya Bunri University) as a moderator delivered his lecture: "International Comparison of Regulatory Science of Health-Functional Foods." Furthermore, Mr. Hiroshi Aimoto (Director, Food Labelling Division, Consumer Affairs Agency, Government of Japan) delivered the lecture "Health Claim Regulations of Foods in Japan" and Dr. Akira Kubo (Tokai University) delivered "Food and Human Health : Food and Risk Reduction of Lifestyle-Related Diseases," and Mr. Yasunori Nakamura (Calpis Co., Ltd.) delivered "Research & Development of Health Foods and Functional Foods." While scientific evidence–based systems have been established in the world, the research and development and institutionalization in Japan went nearly 20 years ahead by establishing a system covering food for specified health use, but health claims are not allowed for any other foods even if there is scientific evidence. Recently, it has been announced that the Consumer Affairs Agency would include 83,000,000 yen in the budgetary request for the next year for research on food health claims. The development of a cooperative framework among industry, academia and government is expected.

The 13th Annual Meeting of the Japanese Society of Aromatherapy – Luncheon Seminar –

The 13th General Meeting of the Japanese Society of Aromatherapy was held for two days on the 10th and 11th of October at the Osaka International Convention Center. Dr. Toshinori Ito (Department of Complementary and Alternative Medicine, Osaka University Graduate School of Medicine) served as a chairperson with the theme "Approach to integrative care with aromatherapy : Aiming at total wellness.

The Association held the luncheon seminar with Amino Up Chemical Co., Ltd. The seminar "The practice and grounds of aromatherapy for patients with inflammatory disease : including the development in China" was conducted in two parts by Dr. Hisashi Machida (Director, CERA, Omotesando) and Dr. Shigeru Abe (Director, Teikyo University Institute of Medical Mycology). First, Dr. Machida introduced the practice of aromatherapy and the development in China. The relation to touch therapy in addition to aromatherapy was introduced and attracted the attention of many visitors. In the second part, Dr. Abe introduced the application of aromatherapy to inflammatory diseases including the cases with beefsteak plant extract of the sponsor, Amino Up Chemical Co., Ltd.

Health Ingredients Japan 2010, Safety & Technology Japan 2010

The 21st "Health Ingredients Japan 2010, Safety & Technology Japan 2010 : Hi & S-tec" was held at the Tokyo Big Sight for three days between the 13th and 15th of October with 42,640 visitors. This exhibition is the biggest technological exhibition on "health and safety," which became two major trends in the recent food field in Asia and consists of Hi (Health Ingredients Japan) gathering functional materials and health materials, and S-tec (Safety & Technology Japan) gathering analysis, measuring and sanitary resources and manufacturing technologies. Over 580 companies exhibited and especially for Hi, numbers of exhibitors reached 110% compared with the previous year.

While the food market seems to be saturated, needs for health, security, safety and high quality are increasing. Essential data on functional materials necessary for developing health–conscious food with growing attention was shown and its application was proposed. Amino Up Chemical Co., Ltd. also participated as an exhibitor and focused mainly on oligonolms and the beefsteak plant extract, and throughout the seminar, described the growing accumulation of basic and clinical evidence.
The Latest Publications and Academic Presentations
*Presenting the titles of research that have appeared in international journals and academic conferences so far this year.*

**Publications**

*International Journal of Integrative Medicine, 2(1) : 98–111 (2010)*
“Review of Cancer Therapy with AHCC® and GCP®: The Long-Term Follow-Up over 12 Years for Stage IV (M1) Cancer of the Lung and The Breast”
Reiki Ishizuka, Kuniyoshi Tajima, *et al.*
(Tajima Clinic)

*Nippon Ishinkin Gakkai Zasshi, 51(3) : 137–142 (2010)*
“Therapeutic Effect of Oligonol, a Low–molecular Polyphenol Formulation, Derived from Lychee Fruits on Murine Oral Candidiasis”
Kazumi Hayama, Shigeru Abe, *et al.*
(Toike University Institute of Medical Mycology)

*AROMA RESEARCH, 11(2) : 28–31 (2010)*
“Anti-Inflammatory Effect of Perilla Extract”

**Academic Presentations**

*11th International Congress on Obesity (Stockholm, Sweden)*
Jul. 11 (Sun.)–15 (Thu.), 2010
“Oligonol, a New Lychee Fruit–derived Low Molecular form of Polyphenol, Enhances Lipolysis in Primary Rat Adipocytes via Activation of the ERK1/2 Pathway”
Junetsu Ogasawara, *et al.*
(Kyorin University)

*32nd ESPEN Congress (Nice, France)*
Sep. 5 (Sun.)–8 (Wed.), 2010
“Active Hexose Correlated Compound (AHCC) Supplementation Changes Cellular Responses of Healthy Subjects”
Elizabeth Gardner, *et al.*
(Michigan State University)

*The 57th Annual Meeting of the Japanese Society of Pharmacognosy (Tokushima, Japan)*
Sep. 24 (Fri.)–26 (Sun.), 2010
“Research on NO Production Inhibitory Activity Substance”
Megumi Sato, Mikio Nishizawa, *et al.*
(Ritsumeikan University)

“The record heat has now gone. In Sapporo, the first snow was observed six days earlier than last year. A new factory of Amino Up Chemical Co., Ltd., where the Secretariat is situated, is undergoing rapid construction. According to the plan, most of the outdoor facility should be completed before snow covers everything and the final completion should be in August next year. There was a tour of the construction site. The new factory is environmentally friendly: S-ranked by CASBEE (Comprehensive Assessment System for Built Environment Efficiency), taking a geographic advantage of Hokkaido, it uses materials from Hokkaido a lot, stocks snow during winter for air conditioning in summer and uses geothermal heat to melt snow.

The ICNIM next year is to be held in October. The factory tour is scheduled and we are looking forward to seeing you in Sapporo.”

(Takehito Miura)