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* This English Edition is a translation of the newsletter published in Japanese on July 15, 2008
The 2008 Kosuna Distinguished Lecture in Nutrition at the University of California, Davis, was delivered on June 2 by Dr. Bharat Aggarwal, Professor of Cancer Research and Medicine at the University of Texas, MD Anderson Cancer Center.

Over 100 faculty members, graduate students and industry scientists attended the lecture entitled “Targeting inflammation by dietary agents for the prevention and treatment of cancer.” Mr. Ken-ichi Kosuna, President of Amino Up Chemical Co., Ltd. welcomed the audience and gave opening remarks, describing the 11-year relationship between Amino Up Chemical Co., Ltd. and UC Davis.

Professor Aggarwal, an internationally recognized expert in phytochemistry and cancer immunology, was one of the original pioneers involved in the identification of TNF-α, a key regulator of the immune system. More recently, his research has been focused on NF-κB and other cytokines and their role in cancer prevention and treatment. In his lecture, Dr. Aggarwal described the central role that inflammation is currently thought to play in many chronic diseases, such as cancer and cardiovascular diseases. Over the past decade, much of his research has been focused on curcumin, a key phytochemical in turmeric, which has a long and rich history of use as a food spice as well as a traditional medicine in India.

Dr. Aggarwal described the molecular and cellular roles that curcumin seems to play in regulating cancer-related genes and cell-cycle activity, and outlined some of the ongoing clinical studies that he has conducted at the MD Anderson Cancer Center using curcumin as part of multiple drug therapy for the treatment of certain cancers. Prevention of cancer and its beneficial effects on public health and health care costs were other topics addressed in the lecture. Finally, Professor Aggarwal made a passionate appeal for more rigorous research on phytochemicals that may be useful in the prevention and treatment of cancer. In this regard, he praised Mr. Kosuna and Amino Up Chemical Co., Ltd. for their long-term commitment to independent, high-quality research studies on phytochemicals that are so urgently needed. It is through such research that real advancements in human health and well being can be made.

In addition to the Kosuna Distinguished Lecture, the 2008 Kosuna Doctoral Fellowship was awarded to Mr. Tony Momma, who is completing his Ph.D. in Nutrition at UC, Davis, with a focus on flavanol phytochemistry. Mr. Momma has co-authored seven manuscripts and six abstracts, has developed a new assay for measurement of cellular nitric oxide, and participated in a variety of animal and human studies on flavanols under the direction of Professor Carl Keen in the Departments of Nutrition and Internal Medicine.

Bharat B. Aggarwal, Ph.D.

Bharat Aggarwal, Ph.D. is a professor of medicine and biochemistry and Chief of the Cytokine Research Section at the University of Texas, M.D. Anderson Cancer Center in Houston. His research involves cancer immunology and more recently the effect of Indian spices on the development of cancer. He has authored over 200 original papers, six books, trained almost 50 scientists and has been invited to give lectures in over 30 countries around the world. He obtained his Ph.D. in Biochemistry from the University of California, Berkeley, did his postdoctoral fellowship at the University of California Medical Center, San Francisco and then worked for almost ten years at Genentech Inc., a biotechnology company in South San Francisco before moving to Houston in 1989.
Reports on Academic Meetings

Pharmacists Career-Up Lecture at Osaka University

Dr. Judith Smith, Associate Professor, The Texas University MD Anderson Cancer Center, gave the special lecture, ”Pharmacists Career Up Lecture” at Osaka University School of Pharmaceutical Science on February 16 last year. Dr. Smith is a board-certified oncologic pharmacist and had presented her research data on the drug interactions of AHCC or Oligonol at our symposium. In this lecture, she presented “The role and education of oncologic pharmacists in the United States”. Dr. Toshinori Ito, Professor, Department of Complementary and Alternative Medicine, Osaka University Graduate School of Medicine, gave a lecture entitled ”Expected role of pharmacists in the field of complementary and alternative medicine (CAM)” before Dr. Smith’s lecture, which was placed as the final special lecture in 2007. The existing status of CAM and the required role of pharmacists were presented in this lecture.

Meeting on our health tomorrow

The seminar titled “Meeting on our health tomorrow–How do you do if a person you love has cancer?” was held at KOKO plaza in Osaka on April 19 last year. In this seminar, Dr. Hisashi Machida, Director, Cera Hospital and Professor Emeritus, Fujian University of Traditional Chinese Medicine, gave a lecture entitled “Touch therapy and immune system in current topics”. Dr. Toshinori Ito, Professor, Department of Complementary and Alternative Medicine, Osaka University Graduate School of Medicine, gave a lecture on ”Functional foods and immune system – roles of functional foods in complementary and alternative medicine”. Hereafter, within the medical field, an important question for medical staffs and patients will be what medical treatment to choose and what kind of association there should be with CAM. It is important to treat and prevent diseases by appropriate methods with an understanding of the state of one’s own body and disease. In this seminar, information necessary for selection of the medical treatment modality was provided.

Reports on Exhibitions

Natural Products EXPO WEST / Supply EXPO 2008

Oligonol had previously been selected as the best product and awarded the NutrAward 2008 during the Natural Products Expo West, which was the biggest exhibition for natural products in the USA, attended by more than 50,000 people each day. Celebrating its 10th year, the NutrAward celebrates innovative, evidence-based health and nutritional ingredients and technology products. Salba® by Core Naturals, which is a kind of herb produced in Peru, L-hydroxyproline, a natural, animal-free fermentation-based amino acid by Kyowa Hakko, USA, and Oligonol were shortlisted for the award. All the industry members who attended Nutracon and the Education Day at the Supply Expo were invited to vote for the winner. The posters were put up on the board in the hall and staff members from Maypro Industries/Quality of Life Labs and Amino Up Chemical Co., Ltd., which presented
Oligonol, explained their product to the attendees in an effort to win.

**Function Foods, Ingredients and Supply EXPO Japan 2008**

The exhibition held at the Tokyo International Forum attracted a total of more than 10,000 visitors and more than 70 exhibitors on April 16 and April 17 last year. Amino Up Chemical Co., Ltd. displayed Oligonol at its presentation booths. In addition, Dr. Hiroshi Nishioka, Senior Director, R&D division, provided a presentation entitled “Low-molecular polyphenol, Oligonol”, as a sports nutrition supplement and supplement with preventive effects against the metabolic syndrome”.

Taking into consideration the Specific Medical Examination started in Japan this April, many of the products with preventive effect on the metabolic syndrome appealed to the visitors and many related seminars were held.

**Ifia/HFE Japan 2008**

The International Food Ingredients Association (IFIA) and Healthy Food Expo Japan 2008 (organized by Food Chemicals Newspaper Inc. and EJK Japan, Ltd.) were held at Tokyo Big Sight for 3 days from May 21 to 23 last year. Slogans were put up as "Science brings together delicious tastes from around the world " and "Science brings together healthiness from around the world”. It was one of the largest exhibitions in Japan, that attracted over 30,000 visitors and 500 exhibitors. Toyo Sugar Refining Co., Ltd. gave ample floor space to introducing Oligonol, and Amino Up Chemical Co., Ltd. staff worked together to publicize the product. Presentations were provided on each day about the production method and components of Oligonol, sports nutrition, and the anti-metabolic syndrome effects of Oligonol. These presentations provided more detailed explanations than previous seminars and included abundant data from basic and clinical researches.

**7th International Bio Forum & Bio Expo Japan**

This event, aimed at gathering all bio-related people, products, technologies and information belonging to bio industries that are expected to grow around the world and enhancing knowledge on the life sciences, was held at Tokyo Big Sight from July 2 to July 4 last year. Among other research results and technologies presented, Dr. Mikio Nishizawa, Professor, College of Life Sciences, Department of Biomedical Sciences, Ritsumeikan University, provided a presentation entitled “Development of anti-inflammatory agents using AHCC” in a bio academic forum. This presentation on the suppressive effect of AHCC on iNOS production, not only the effect itself, but also the underlying mechanism involving an anti-sense mRNA transcript, attracted a lot of attention from visitors.
The Latest Academic Presentations and Publications

* Presenting the titles of research that have appeared in academic conferences and international journals so far this year.

**Academic Presentations**

- **The 25th Annual Meeting of the Japan Eastern Medical Association (Tokyo, Japan)**
  - Feb. 17 (Sun.), 2008
  - “Alleviating Function of AHCC for Side Effects in Chemotherapy”
  - Takehito Miura et al. (Amino Up Chemical Co., Ltd.)

- **The 16th European Congress on Obesity (ECO 2008) (Geneva, Swiss)**
  - May 14 (Wed.) – 17 (Sat.), 2008
  - “Amelioration of Abdominal Obesity by Low Molecular Weight Polyphenol (Oligonol) from Lychee”
  - Jun Nishihira et al. (Hokkaido Information University)

- **The 8th Scientific Meeting of Japanese Society of Anti-Aging Medicine (Tokyo, Japan)**
  - Jun. 6 (Fri.) – 7 (Sat.), 2008
  - “The Inhibitory Effect on Human Internal Fat Through Intake of Low-Molecular Polyphenol Oligonol Derived from Lychee”
  - Kentaro Kitadate, Jun Nishihira
    (Amino Up Chemical Co., Ltd., Hokkaido Information University)

- **The American Association of Immunologists (AAI–2008)/Experimental Biology 2008 (San Diego, USA)**
  - Apr. 5 (Sat.) – 9 (Wed.), 2008
  - “Effects of Active Hexose Correlated Compound(AHCC) on Humoral Immunity in Food Deprived Mice Immunized with Ovalbumin(OVA)”
  - Hernan Aviles et al. (Binghamton University)

- **American Association for Cancer Research (AACR 2008) (San Diego, USA)**
  - Apr. 12 (Sat.) – 16 (Wed.), 2008
  - “Oligonol Inhibits UVB- and/or Phorbol Ester-induced Expression of COX-2, Activation of Nuclear Factor-κ B, AP-1 and C/EBP, and Chemically Induced Papillomagenesis in Mouse Skin In Vivo”
  - Joyde Kum Pon Kundu and Young-Joon Sungh
    (Seoul National University)

- **The 62th Japanese Society of Nutrition and Food Science (Sakado, Japan)**
  - May 2 (Fri.) – 4 (Sun.), 2008
  - “Anti–LDL Oxidative Effects of Polyphenol Derived From Lychee Using Endothelial Cells”
  - Yumiko Hirata (Ochanomizu University)

A Picture Showing a Presentation at the Annual Meeting of the Japan Eastern Medical Association.
Publisher is Takehito Miura, Amino Up Chemical Co., Ltd.

A Picture Showing a Presentation at the Japanese Society of Anti-Aging Medicine
Publisher is Kentaro Kitadate, Amino Up Chemical Co., Ltd.

A Picture Showing a Presentation at the Japanese Society of Anti-Aging Medicine
Publisher is Kentaro Kitadate, Amino Up Chemical Co., Ltd.
“Active Hexose Correlated Compound Activates Immune function to Decrease Bacterial Load in a Murine Model of Intramuscular Infection”
Hernan Aviles et al. (Binghamton University)

Hepatology, 47 (2) : 686-697(2008)
“Natural Antisense Transcript Stabilizes Inducible Nitric Oxide Synthase Messenger RNA in Rat Hepatocytes”
Kosuke Matsui et al. (Department of Surgery, Kansai Medical University)

“The Supplementation of Oligonol, the New Lychee Fruit-Derived Polyphenol Mixture Converting into a Low-Molecular Form, Has a Positive Effect on Fatigue during Regular Track-And-Field Training in Young Athletes”

Bioscience Biotechnology and Biochemistry, 72 (2) : 463-476 (2008)
“Antioxidative Effects of a New Lychee Fruit-Derived Polyphenol Mixture, Oligonol, Converted into a Low-Molecular Form in Adipocytes”
Takuya Sakurai et al. (Kyorin University)

“Oligonol Inhibits UVB-Induced COX-2 Expression in HR-1 Hairless Mouse Skin-Ap-1 and C/EBP as Potential Upstream Targets”
Joydeb Kumar Kundu et al. (College of Pharmacy, Seoul National University)

Reports on European Congress on Obesity

European Congress on Obesity is a major academic meeting dealing with obesity in the EU. It is held on from May 14 to May 17 at Geneva in Switzerland. This Congress covered a wide range of research areas in obesity from the fundamentals to clinical studies. Within the area of fundamentals, there was much on molecular science and elucidation of action mechanisms related to adipokine and obesity. Within the area of clinical studies, there were epidemiological studies concerned with such things as the relationship between obesity and residence as well as eating habits. It was commonly recognized that the prevention of obesity is responsible for the prevention of diabetes because obesity related to various diseases. However, it is expected that future studies will be on how much the changes of obesity index or biochemical indices resulted in the risks of diseases.

Japan was represented by presentations from Ochanomizu University, Tsukuba University, Fukuoka University and so on, and there were participants from South Korea, China, Australia, Canada, USA and various countries in South America besides the EU.

This time, Dr. Jun Nishihiira (Hokkaido Information University) and Amino Up Chemical Co., Ltd. presented a poster session called HOT TOPICS. The title was "Amelioration of abdominal obesity by low molecular weight polyphenol (Oligonol) from lychee". In this study, it was confirmed that abdominal fat has been decreased by treatment using low molecular polyphenol from lychee (Oligonol).

The subjects of this clinical study were 19 people (male and female) having more than 85cm abdominal circumference aged from 20s to 50s. They were administered with Oligonol (200mg) or a placebo for 10 weeks. The mean abdominal circumference of the Oligonol administered group decreased from 93cm to 90cm and the abdominal and subcutaneous adipose decreased 15% and 6%, respectively. The Oligonol was considered to suppress metabolic syndrome and lipid peroxidation because it was confirmed that there was anti-oxidant activity in the blood sample.

Dr. Jun Nishihiira in the poster presentation hall. There were many questions and a good deal of interest from visitors.
Keynote lecture

Modifying the Relationship between Tumor Cells and the Host.
Masuo Hosokawa (Prof. Emeritus, Hokkaido University)

AHCC and Cancer Patients
Yasuhiro Kamiyama (Prof. Emeritus, Kansai Medical University)

Chairpersons: Basic Study
Masuo Hosokawa
(Prof. Emeritus, Hokkaido University)
Masatoshi Yamazaki
(Prof., Faculty Pharmaceutical Sciences, Teikyo University)

Chairpersons: Clinical Study
Yasuhiro Kamiyama
(Prof. Emeritus, Kansai Medical University)
Yutaka Mizushima
(Kyoaiak Hospital)

July 26-27, 2008 Hotel Royton Sapporo, Royton Hall, 3rd Floor

Functional Polyphenol Symposium - Novel use of low-molecular polyphenol: Oligonol
Chairpersons:
Carl Keen (Prof., Department of Nutrition, University of California, Davis)
Young-Joon Surh (Prof., College of Pharmacy, Seoul National University)

July 25, 2008 Hotel Royton Sapporo 2nd Floor

Sponsor: The AHCC Research Association
Support: Hokkaido Bureau of Economy, Trade and Industry/Amino Up Chemical Co., Ltd.

Report on the Executive Officer's Meeting

This year’s Executive Officer’s Meeting was held on June 28, at the Renaissance Sapporo Hotel, Sapporo.

According to the Rules of the Association, the secretary reported the results of the 2007 activities, the work plan and the expenditure for the projects in 2008. The entry of new members was certified at the meeting. The way in which “The Functional Polyphenol Symposium” should be held was also discussed.

The approved activities report and the work plan have been delivered to members enclosed with this newsletter. Please have a look at them. We seek your understanding and ask you to accept that this delivery replaces this year’s general assembly.

Editorial Postscript

It has become warm and salubrious with early summer setting in here at Hokkaido, as we are editing this letter in June. In July, when this letter will be published, an environmental summit to debate environmental problems will be held at Toya in Hokkaido, and the use of COOL-BIZ (COOL BIZ is the light attire campaign waged mainly by the Japanese Ministry of Environment for the purpose of environmental protection) will be insisted upon. On a business trip to Tokyo, when I get into the airport, I am engulfed by the summer heat and reach my wit’s end. In Hokkaido, it always feels like COOL-BIZ as it is. The 16th International Symposium of AHCC Research Association shall be held in mid-summer in Sapporo, Hokkaido.

We are looking forward to your participation. (Takehito Miura)