

## Establishment of a Social System That Enables Elderly People to Enjoy Their Lives by the Analysis of “Big Health” Data ~ Our Challenge for Developing a Framework for Disease Prediction and Prevention in Hirosaki COI ~

Koichi Murashita

*Professor*

*COI Research Initiative Organization Hirosaki University*

### <Summary>

Since 2005, Hirosaki University (Aomori prefecture) has been carrying out an “Iwaki Health Promoting Project” that involves both health-promoting and research activities, involving more than 1,000 residents in Hirosaki city (Iwaki district). In this project, more than 600 items of health data(including blood and urine factors and inquiries about social status and daily customs )are investigated, and we’ve been storing chronological health information(a total of 20,000 residents(including students)).

In 2013, our project were selected for “Center of Innovation (COI)” program conducted by Japan Ministry of Education, Culture, Sports, Science and Technology (MEXT). Since then, major healthcare companies participated in our platform one after another. As such, our platform aim to construct a framework for predicting and preventing the diseases and health status by the analysis of “big health “ data, collaborating with companies, local government, and also residents. Actually, we are now constructing the algorism for prediction of dementia and also elucidating the relationships between health status, lifestyle, and social environment.

On the other hand, we’re trying to construct the social structure for achieving the health promotion of local residents. For example, doctors in our university are giving education about health for office workers, students in school, and so on. Our social efforts including local government and public media are bringing on the improvement of the health conscious (health literacy) to the Aomori prefecture residents, who are notorious for having the worst longevity in Japan. And our platform is attracting a great deal of attention by various communities.

In this manuscript, we introduce our vision for future “Health-longevity society“, and our whole plan for achieving the vision.

## *Lactobacillus helveticus*-Fermented Milk and Milk Protein Hydrolysate Effect on Alleviation of Fatigue during Exercise

Hidetoshi Miyazaki  
Core Technology Laboratories  
Asahi Group Holdings, LTD.

### <Summary>

Lack of exercise serves as a risk factor for mortality and disease progression and is closely associated with the prevalence of metabolic disorders, such as cardiovascular diseases, diabetes, and cancer. In its Global Recommendations on Physical Activity for Health, the WHO reports that the regular physical activity is effective in reducing the risk of these conditions and recommends increased physical activity. Indeed, regular walking has been shown to have beneficial effects in relation to cardiovascular diseases. However, middle-aged and elderly people are more susceptible to muscle soreness and fatigue than young people, which could make it difficult to adopt new exercise habits and could in fact result in decreased physical activity. Therefore, there is a need to develop approaches to alleviate the muscle soreness and fatigue associated with exercise. We have demonstrated that *Lactobacillus helveticus*-fermented milk can reduce muscle soreness, improve exercise performance, and prevent fatigue during exercise. These beneficial effects of *L. helveticus*-fermented milk may be attributed to the presence of bioactive, or functional, peptides that may affect the vascular endothelium which regulates vasodilation and blood circulation. This report summarizes our findings regarding a milk protein hydrolysate which contains the same functional peptides, with a particular focus on its effect on the alleviation of fatigue during exercise.

## Report on the Symposium “New Frontiers of Integrated Food Science about ‘Food and Health’” Organized by the ILSI Japan-Endowed Chair of Functional Food Genomics

Shinji Okada, Ph.D.

*Associate Professor*

*ILSI Japan-Endowed Chair of Functional Food Science and Nutrigenomics,*

*Graduate School of Agricultural and Life Sciences,*

*The University of Tokyo*

### <Summary>

The symposium “New Frontiers of Integrated Food Science about ‘Food and Health’” was held at the University of Tokyo Yayoi Auditorium on September 14, 2016. In this symposium, the activities and achievements in the 2nd and 3rd terms of the ILSI Japan-Endowed Chair of Functional Food Science and Nutrigenomics were presented. The future outlooks about the researches on functional foods were also presented. The presentations consisted of three topics by the researchers in the Graduate School of Agricultural and Life Sciences, the University of Tokyo, two topics by the researchers in public research institutions, and eight topics by the researchers in food and chemical companies.

The symposium focused on the importance of the past activities and accomplishments of the ILSI Japan-endowed chair. The future expansions of functional foods researches were also discussed.

## Report on 4th Asia-Pacific International Food Safety Conference & 7th Asian Conference on Food and Nutrition Safety

Masao Shimizu  
*Health Care Food Research Laboratories,  
Kao Corporation*

### <Summary>

4th Asia-Pacific International Food Safety Conference & 7th Asian Conference on Food and Nutrition Safety were held at the Wembley st. Giles Hotel in George Town, Penang, Malaysia from 11th to 13rd of October. The three-day conference included 4 keynote lectures, 36 oral presentations in 9 sessions, and 73 poster presentations. The conference attracted 435 attendees from over 20 countries not only in Asia pacific region, but also in the West.

## Participation Report on the 3rd International Conference on Rice Bran Oil

Takahiro Eitsuka, Ph.D.

*Assistant Professor*

*Faculty of Applied Life Sciences,*

*Niigata University of Pharmacy and Applied Life Sciences*

Shigeo Nakajima, Mr.

*Senior Adviser*

*Tsuno Food Industrial CO.,LTD*

### <Summary>

The 3rd International Conference on Rice Bran Oil (ICRBO 2016) was held on October 24-25, 2016 at ITO International Research Center, The University of Tokyo. International researchers and developers of rice bran oil have reported and discussed the latest studies covering from basic research on nutrition of rice bran oil to its commercialization.

Report of the 8th BeSeTo Meeting  
- ILSI Asia Branch Dialogue on Improving Food Safety,  
Risk Analysis and Regulatory Science -

Kenkichi Fujii, Ph.D  
*R&D – Safety Science Research*  
*Kao Corporation*  
Naohiro Ikeda  
*R&D – Safety Science Research*  
*Kao Corporation*  
Atsushi Uzu  
*Executive Director*  
*ILSI Japan*

<Summary>

The 8th BeSeTo Meeting, hosted by ILSI Focal Point in China, was convened on 30-31 August, 2016 at Guangxi Hotel, Beijing, China. Participants included staff and member representatives of ILSI Focal Point in China, ILSI Korea, ILSI Japan, ILSI Southeast Asia Region and ILSI Taiwan; and risk managers from China National Centre for Food Safety Risk Assessment (CFSA), division director from Korea Ministry of Food and Drug Safety (MFDS) and researcher from Korea National Food Safety Information Service (FSIS). A half day Workshop on the Regulatory Control of Food Contact Materials organized by ILSI Focal Point in China took place before the 8th BeSeTo Meeting. International experts and regulators from China, Korea and Japan presented regulatory practices at international level and respective countries. Dr. Junshi Chen, Director, ILSI Focal Point in China chaired the 8th BeSeTo Meeting according to the agenda agreed by the relevant ILSI branches.