ICoFF / ISNFF

Food Factor Science from the Molecular to Human Studies

December 1 (Sun) – 5 (Thu), 2019

Kobe Convention Center, Kobe, Japan

ICoFF 2019

The 7th International Conference on Food Factors

ISNFF 2019

The 12th International Conference and Exhibition on Nutraceuticals and Functional Foods

Program

世界の金賞を味わいませんか。

九州産さつまいも100%・霧島裂罅水（キリシマレッカスイ）100%・国産米100%・自社工場生産100%

INTERNATIONAL SPIRITS CHALLENGE 2019
DOUBLE GOLD

ISC
2019最高賞

INTERNATIONAL WINE & SPIRIT COMPETITION
IWSC GOLD 2018
JUDGES' SCORE: 93+
OUTSTANDING

IWSC
2018優秀金賞

BTI
2018金賞・
2018ベスト焼酎

本格焼酎は糖質ゼロ※1・プリン体ゼロ※2

※1 栄養表示基準による　※2 100mlあたりプリン体0.5mg未満を「プリン体ゼロ」と表示

霧島酒造株式会社 KIRISHIMA SHUZO Co.

飲酒は20歳から。飲酒運転は、法律で禁じられています。
飲酒は適量を。妊娠中や授乳期の飲酒はお控えください。

ICoFF / ISNFF

Food Factor Science
from the Molecular to Human Studies

ICoFF 2019

The 7th International Conference on Food Factors

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Program

December 1 (Sun) – 5 (Thu), 2019
Kobe Convention Center

Kobe, Japan

Contents

Welcome to the ICoFF2019/ ISNFF2019 KOBE

Greetings

It is our great honor to hold the 7th International Conference on Food Factors (ICoFF2019), the 12th International Conference and Exhibition on Nutraceuticals and Functional Foods (ISNFF2019) and the 9th International Conference on Polyphenols and Health (ICPH2019) as FOOD FACTOR WEEK IN KOBE from November 28th to December 5th, 2019.

These three international conferences have independently provided important novel information about function, characteristics, and analysis of food components to all the celebrated scholars, industrial professionals and students. Here in Kobe, it is our pleasure to hold three celebrated international conferences in the same period at the same venue, Kobe Convention Center. We believe that the series of conferences will offer opportunities to share information, exchange scientific ideas and create network between the participants from all over the world.

Kobe is an attractive city having a unique style with the exotic atmosphere in Japan, which has been affected by the foreign cultures and flourished as the international port since old days. Blessed with natural beauty such as Mt. Rokko and Seto Inland Sea, Kobe is known as the gourmet street (Kobe beef, Nada Japanese sake, wine and sweets), as well as the fashion street with the sophisticated image. Therefore, Kobe is one of the most popular sightseeing cities with many wonderful sightseeing spots including the famous hot spring street in Arima. All the participants may also visit famous historical cities, Kyoto, Nara and Himeji. These cities can be reached in one hour by train. Please visit UNESCO World Heritage sites and enjoy Japanese culture and cuisine during your staying in Kobe.

Hitoshi Ashida, PhD
Kobe University
Joint Organization Committee Chair
ICoFF2019/ICPH2019/ISNFF2019

Welcome to the ICoFF2019/ ISNFF2019 KOBE

Welcome Address

Welcome to the 7th International Conference on Food Factors (ICoFF2019) !

On behalf of the organizing committee members, I appreciate your participation to ICoFF2019. We are delighted to hold the ICoFF2019 as a joint conference with the 12th International Conference and Exhibition on Nutraceuticals and Functional Foods (ISNFF2019). It is a noteworthy point that this is the first ICoFF-ISNFF joint conference. With respect to the conference theme, we have adopted “Food Factor Science from Molecular to Human Studies” for ICoFF2019/ISNFF2019.

With the mission of promoting research into all aspects of basic and applied Food and Nutritional Science, ICoFF held its first conference in 1995 and has continued to hold the conference every four years. ICoFF is one of the largest international conferences for researchers, scientists, professors and students in the field of food factors and their health-promoting effects. After the first ICoFF, the executive committee at that time established the Japanese Society of Food Factors (JSoFF). Since then, JSoFF has been mainly running the ICoFF. The organizing committee of ICoFF2019 is mainly comprised of members of JSoFF and is exerting their utmost efforts in preparing for the conference. We believe that you will be satisfied with the academic program, social events, and our management.

We really hope your impassioned discussion about scientific presentations. This joint conference will be a good opportunities to exchange scientific ideas and create networks between people from academia, industries and regulatory authorities as well as between young and established scientists and professionals.

Hitoshi Ashida.

Hitoshi Ashida, PhD
Kobe University
President
The 7th International Conference on Food Factors

Welcome Address

The International Society for Nutraceuticals and Functional Foods (ISNFF) is pleased to have its 12th Annual Conference and Exhibition joint with the 7th International Conference on Food Factors (ICoFF) in Kobe, Japan. On behalf of the local organizing committed ISNFF as well as its international directorate, we would like to express our sincere gratitude to all the celebrated scholars, students, and industry professionals from around the world.

For last decades, our knowledge on tertiary function (health promoting activity) of food has tremendously increased and spread over food science, and nutrition areas. Now food is used not only as a source of nutrients but for health promotion, disease risk reduction, and support for healing from illnesses. For these purposes, multidisciplinary collaboration is necessary. Furthermore, bridging the existing gap between science and regulation needs attention.

The ISNFF was established by Dr. Fereidoon Shahidi and colleagues in 2008 as a not-for-profit society in response to widespread recognition of the health promotion via food. Over the past decade, ISNFF has successfully bridged the gap among science communities, health care professionals, industry and consumers through its annual meetings, short courses, seminars and exhibitions. The annual meetings, the main event of ISNFF, have been held every year around the globe. In this joint conference, we encourage and trust that you would enjoy scientific exchange in wider areas of research and product development and making new and strong networking. We strongly believe that this joint conference facilitates and strengthens science on food function for enhancing quality of human life. We encourage you to actively participate in this joint conference and join our next annual meeting in Nanjing, China, October, 2020.

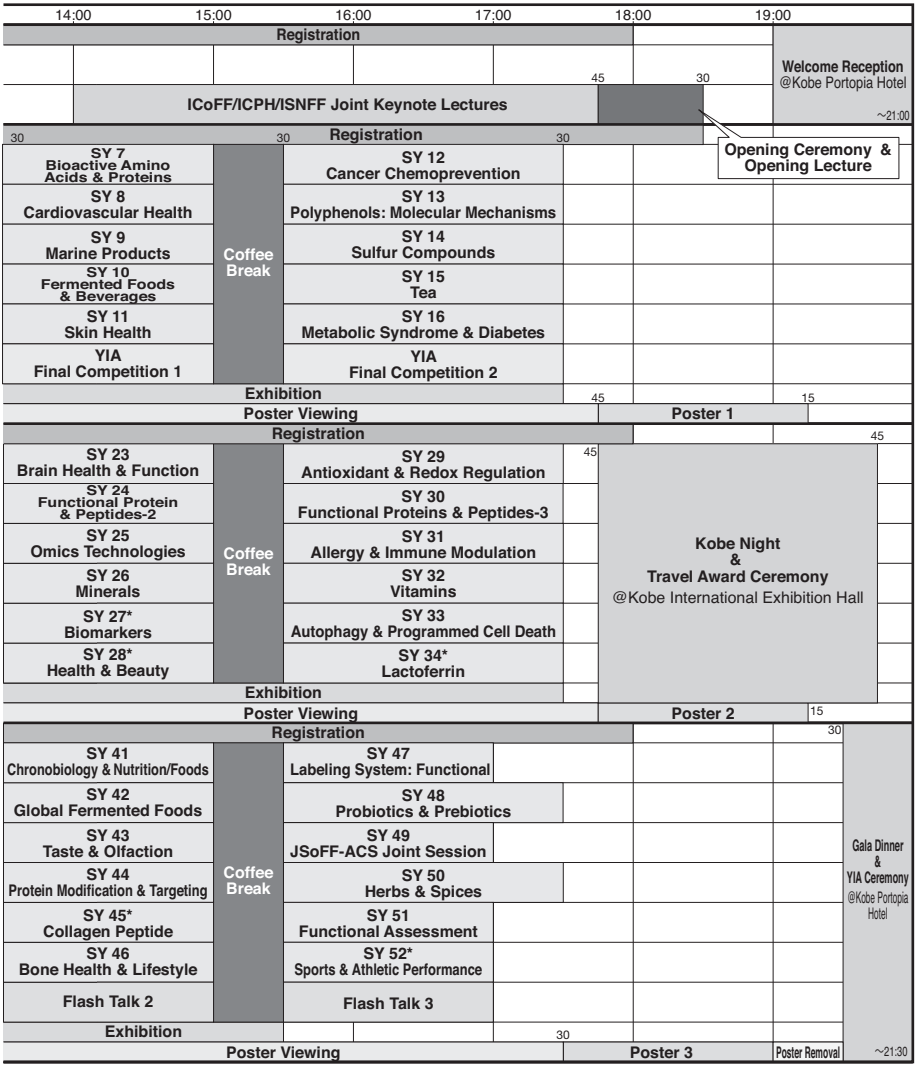
Kenji Sato, PhD, ISNFF 2019 Local Conference President

Kazuo Miyashita, PhD, ISNFF Chair 2018-2019

Fereidoon Shahidi, PhD, ISNFF Principle Founder and Director

Program at a Glance

		8:30	9:00	10:00	11:00	12:00	13:00
Dec. 1 (Sun)	**3F Entrance**	**Registration** (7:45~) 30				45	30
	Room B			**ICoFF Pre-Symposium Polyphenols:The road from plants to functional foods**			**Special Lecture**
	Portopia Hall						
Dec. 2 (Mon)	**3F Entrance**	30 **Registration** (7:45~)				15	15
	Room A	**Plenary Lectures 1 & 2**	**Coffee Break**	**SY 1 Washoku**		**LS 1** Daicel	
	Room B			**SY 2 Nutraceuticals**		**LS 2** Ezaki Glico	
	Room C			**SY 3 Fruits & Vegetables**		**LS 3** Fuji Oil	
	Room D			**SY 4 Absorption, Bioavailability & Metabolism**		**LS 4** Nitto Pharma.Ind.	
	Room E			**SY 5 Functional Lipids**		**LS 5** PHARMA FOODS	
	Room F			**SY 6* Quercetin glycoside and Curcumin**		**LS 6** Nisshin Seifun	
	Exhibition		**Exhibition**				
	Poster Room		**Poster Mounting**			**Poster Viewing**	
Dec. 3 (Tue)	**3F Entrance**	**Registration** (7:45~)					
	Room A	**Plenary Lectures 3 & 4**	**Coffee Break**	**SY 17 Gastrointestinal Health**		**LS 7** TAIYO KAGAKU	
	Room B			**SY 18 Functional Protein & Peptides-1**		**LS 8** Chonbuk Natl. Univ. Hosp.	
	Room C			**SY 19* Garlic Supplement**		**LS 9** Sun Chlorella	
	Room D			**SY 20 Nutritional Regulation of Epigenetics**		**LS 10** NUTRILITE	
	Room E			**SY 21 Natural Plant Pigments**		**LS 11** Maruha Nichiro	
	Room F			**SY 22 Molecular Targets of Food Factors**		**LS 12** Agilent Technol.	
	Exhibition		**Exhibition**				
	Poster Room		**Poster Viewing**				
Dec. 4 (Wed)	**3F Entrance**	**Registration** (7:45~)					
	Room A	**Plenary Lectures 5 & 6**	**Coffee Break**	**SY 35 Lipid Quality：Lipoquality**		**LS 13** SCIEX	
	Room B			**SY 36 Phenolics & Antioxidants**		**LS 14** POLA ORBIS	
	Room C			**SY 37 Exosome & MicroRNA**		**LS 15** Nippon Flour Mills	
	Room D			**SY 38 Functional Carbohydrates**		**LS 16** Kewpie	
	Room E			**SY 39 Hormesis**		**LS 17** MIYARISAN PHARMA.	
	Room F			**SY 40 Food Science in the Big Data Era**		**LS 18** Assoc. Salacia Promotion	
	Room G			**Flash Talk 1**			
	Exhibition		**Exhibition**				
	Poster Room		**Poster Viewing**				
Dec. 5 (Thu)	**3F Entrance**	**Registration** (7:45~)			45		
	Room A	**Plenary Lectures 7 & 8**	45	**SY 53 Human Studies of Functional Food Factors**		**Closing Ceremony**	
	Room B			**SY 54 Japanese Diets**			
	Room C			**SY 55 Skeletal Muscle Health**			
	Room D			**SY 56 Soy and Isoflavone Metabolites**			
	Room E			**SY 57* Tomatoes**			
	Room F			**SY 58* Phytonutrients**			



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ICoFF 2019 is organized by
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The organizing committee would like to express its sincere appreciation to the following organizations for their contribution to the success of the ICoFF2019/ICPH2019/ISNFF2019.

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Kobe Tourism Bureau・Kobe Convention Bureau
TSUTOMU NAKAUCHI FOUNDATION

Support Organizations

The Uehara Memorial Foundation
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The Intestinal Microbiology Society/formerly Japan Bifidus Foundation
Japan Society of Nutrition and Food Science
Japanese Association for Animal Cell Technology
Japanese Society for Amino Acid Sciences
The NARO Bio-Oriented Technology Research Advancement Institution
The Society of Tea Science of Japan
The Vitamin Society of Japan
Royal Society of Chemistry
Clinical Trial Center for Functional Foods, Chonbuk National University Hospital (Luncheon Seminar)

Endorsements

Japan National Tourism Organization

Kobe City

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Conference Information

Date & Venue

Dates: December 1 (Sun) - 5 (Thu)

Venues:

Kobe International Conference Center
6-9-1, Minatojima-nakamachi, Chuo-ku, Kobe-shi, Hyogo, 650-0046, Japan
TEL: +81-78-302-5200 FAX: +81-78-302-6485

Kobe International Exhibition Hall
6-11-1, Minatojima-nakamachi, Chuo-ku, Kobe-shi, Hyogo, 650-0046, Japan
TEL: +81-78-302-1020 FAX: +81-78-302-1870

Kobe Portopia Hotel
6-10-1, Minatojima-nakamachi, Chuo-ku, Kobe-shi, Hyogo, 650-0046, Japan
TEL: +81-78-302-1111

Registration

The Registration Desk (3F, Kobe International Conference Center) is open during the following hours:

Nov. 30 (Sat)	14:00 -18:00	Dec. 3 (Tue)	7:45 -18:00
Dec. 1 (Sun)	7:45 -18:00	Dec. 4 (Wed)	7:45 -18:00
Dec. 2 (Mon)	7:45 -18:00	Dec. 5 (Thu)	7:45 -11:00

Name Badge

Each delegate will receive a name badge upon registration. For security reason, all participants are requested to wear their name badges during all conference activities. No admission to sessions, exhibition and official functions included in the registration fee will be granted without the name badge.

Accompanying person is granted to enter, attend and enjoy the following:

- Exhibition
- Opening Ceremony
- Welcome Reception
- Coffee Break
- Closing Ceremony
- Kobe Night

Cloakrooms

Cloakrooms are located on the 4th floor of the Kobe International Conference Center and the 2nd floor of the Kobe International Exhibition Hall.

Date	4F, Kobe Int'l Conference Center	2F, Kobe Int'l Exhibition Center
Dec. 1 (Sun)*	7:45-18:00	----
Dec. 2 (Mon)	7:45-18:00	9:00-20:00
Dec. 3 (Tue)	7:45-18:00	9:00-20:00
Dec. 4 (Wed)	7:45-18:00	9:00-19:30
Dec. 5 (Thu)	7:45-13:30	-----

＊Kobe Portopia Hotel has cloak service.

Internet Access (free WiFi)

Kobe International Conference Center / Kobe International Exhibition Hall

ID: Food_Factor_Week PASS: kobe2019

Photocopies and Printing (Charge required)

Photocopy and printing service are available at the venue office (2F, Kobe International Conference Center).

Message Board

A message board will be located at the registration area.

Refreshments

Refreshments are provided on each floor of Kobe International Conference Center and Poster Room at Kobe International Exhibition Hall.

Lunch

Application tickets for luncheon seminars are attached to the name badge of ICoFF2019/ISNFF2019 attendees.

The application ticket must be exchanged to one of the luncheon seminar admission tickets every day. On-Site distribution hours of the admission tickets are between 7:45 and 11:30 each day at the lobby of Room A (1F, Kobe International Conference Center).

Exhibition

The exhibition will be opened on Dec. 2 (Mon), 9:00-17:30, Dec. 3 (Tue), 9:00-17:30, and Dec. 4 (Wed), 9:00-15:30, located in Reception Hall (3F, Kobe International Conference Center).

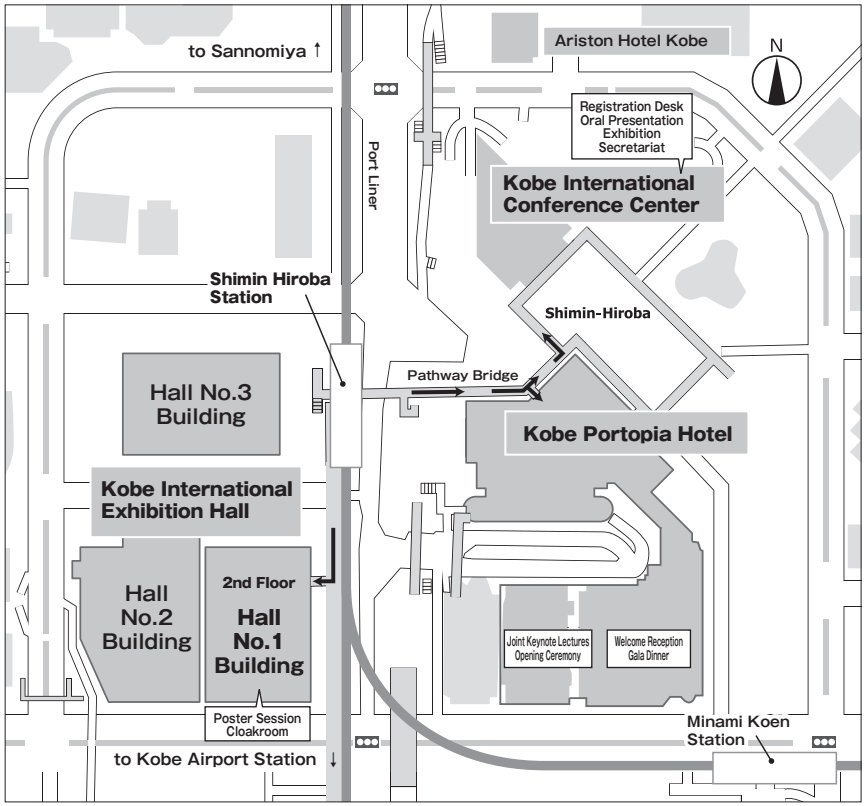
ICoFF2019/ICPH2019/ISNFF2019 Secretariat

The Secretariat Room is located at Room 403 (4F, Kobe International Conference Center).

E-mail: icoff-icph2019@jtbcom.co.jp

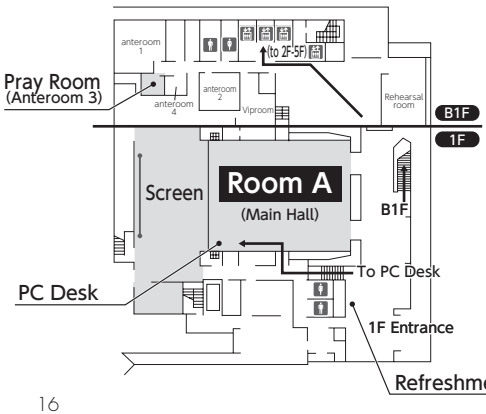
TEL: +81-78-302-6900 (Nov. 28-Dec. 5)

Area Map & Floor Guide



Kobe International Conference Center

B1F • 1F



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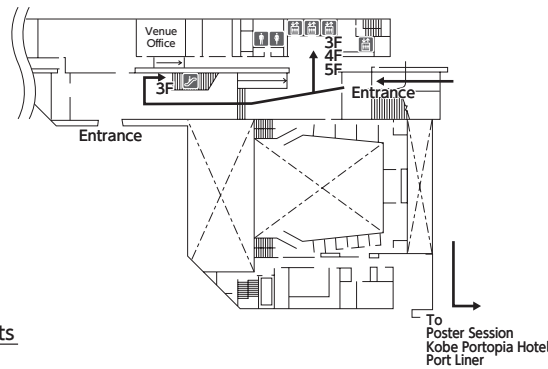
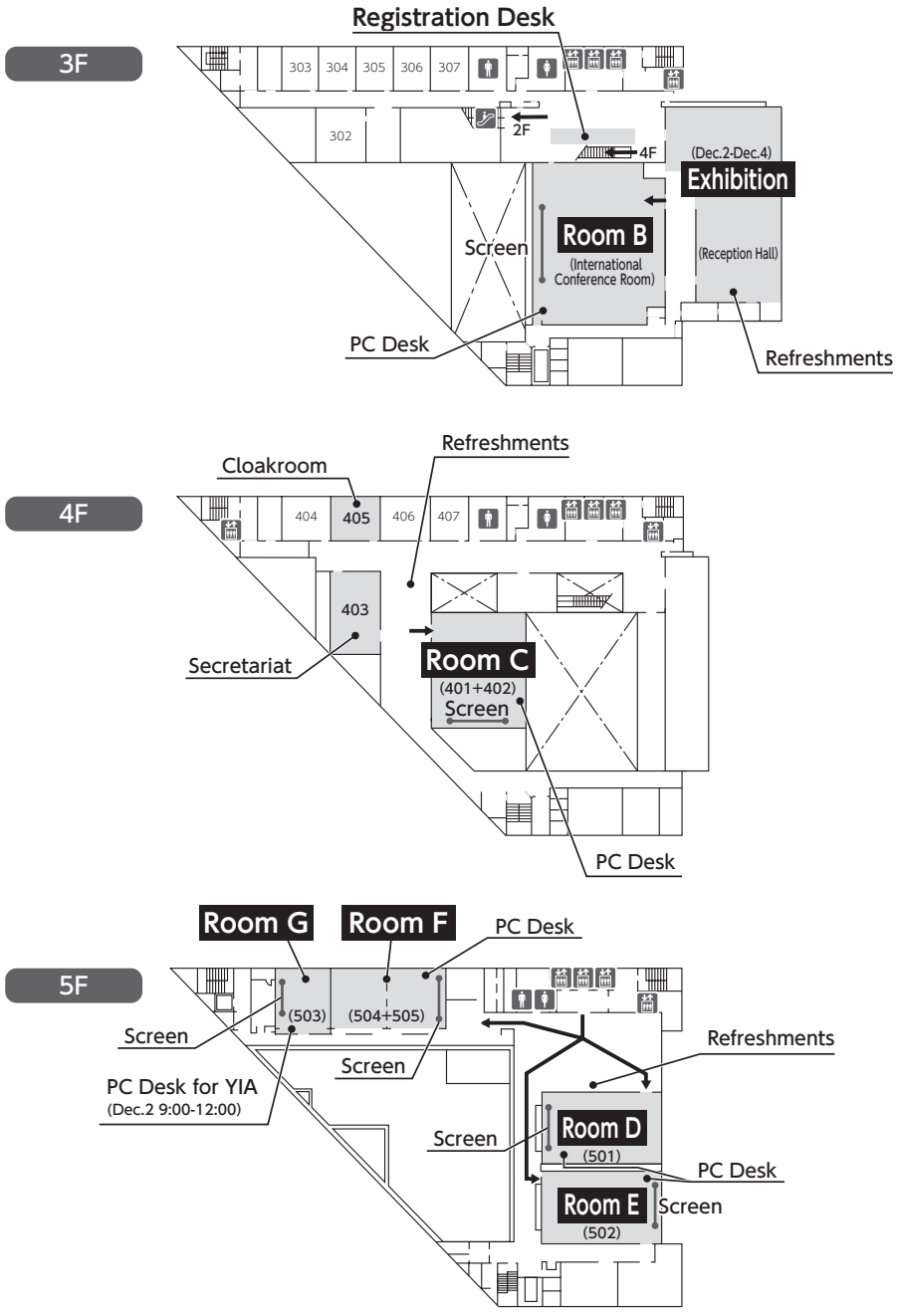
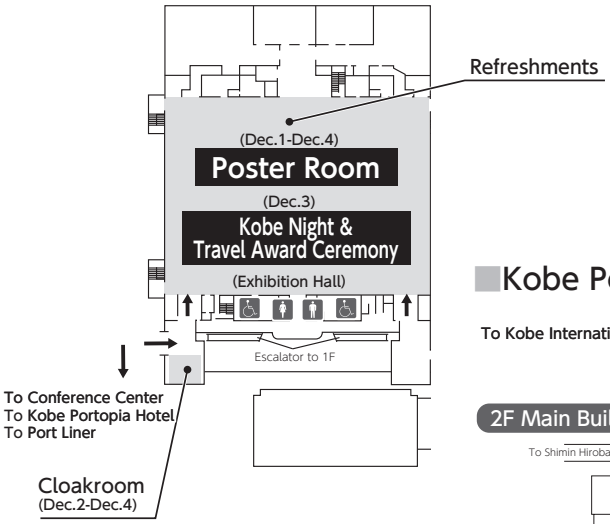


Kobe International Conference Center

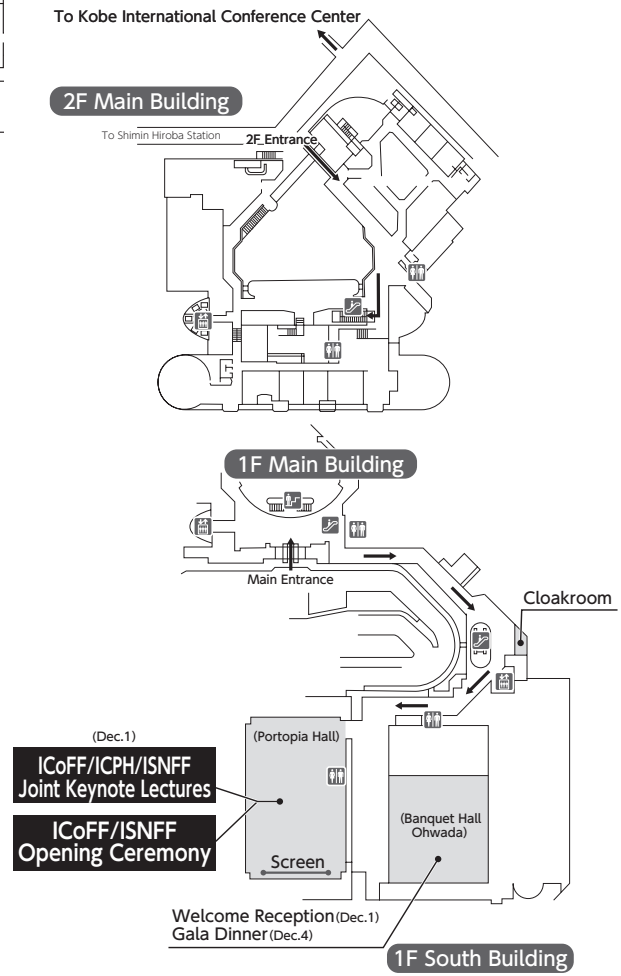


Kobe International Exhibition Hall

2F Hall No.1 Building



Kobe Portopia Hotel



Social Programs

Opening Ceremony & Opening Lecture

Date & Time: 17:45-18:30, Dec. 1 (Sun)
Venue: Portopia Hall, Kobe Portopia Hotel

Welcome Reception

Date & Time: 19:00-21:00, Dec. 1 (Sun)
Venue: Banquet Hall Ohwada, 1F South Building, Kobe Portopia Hotel

Kobe Night & Travel Award Ceremony

Date & Time: 17:45-19:15, Dec. 3 (Tue)
Venue: 2F Exhibition Hall, Hall No.1 Building, Kobe International Exhibition Hall
*Winners of Travel Awards will be awarded at the Kobe Night.
*All participants are welcome. Light meal, sweets and drinks are provided.

Gala Dinner & YIA Ceremony

Date & Time: 19:30-21:30, Dec. 4 (Wed)
Fee: JPY15,000
Venue: Banquet Hall Ohwada, 1F South Building, Kobe Portopia Hotel
Style: Buffet / Smart Casual
*Advance ticket purchase is required to participate the Gala Dinner.
Winners of Young Investigators Awards will be announced and awarded at the Gala Dinner. Please be noted that the awards may be stripped if the winners do not appear in the ceremony.

Travel Award Ceremony

Winners of Travel Awards will be awarded at the Kobe Night.

Closing Ceremony

Date & Time: 12:00-12:30, Dec. 5 (Thu)
Venue: Room A (1F, Main Hall, Kobe International Conference Center)

Instruction for Oral Sessions

For Invited speakers and selected oral presentations

Speakers should note the following information:

Please make sure to be in the session room and notify the conference staff at least 20 minutes before the session starts.

All speakers are requested to bring their own PC or the data on a USB memory stick for presentation.

The session rooms are equipped with a Windows laptop PC and LCD projector on which Microsoft PowerPoint is installed (OS: Windows10, Software: Microsoft PowerPoint 2010, 2013, 2016).

Slides with aspect ratio of 4:3 is recommended for presentations.

Those who bring their data in USB memory stick:

Speakers who bring their presentation data by a USB memory stick are required to use the Windows format. The name of the file should be labeled with session number and their name as follows:

e.g. SY00-00_Name.ppt

Speakers are asked to submit their data to the PC desk in the session room before your assigned session starts.

Those who use their own laptop:

In case the presenter use Macintosh or special software except PowerPoint 2010, 2013, 2016 for presentation, it is recommended to use their own laptop. PCs must have a display output interface with a D-sub 15-pin plug. If necessary, bring an adaptor.

To avoid unexpected problems, it is highly recommended to check the connection or compatibility of own PC with the video projector on the podium in the session room of you will present by the Coffee break / Lunch time before your presentation.

For Speakers of Joint Keynote Lectures:

Speakers of Joint Keynote Lectures are requested to submit their data at the Secretariat (Room 403) by 10:00, Dec. 1.

For YIA Presenters

YIA presenters are asked to prepare a presentation data in PowerPoint format and bring the data by a USB memory stick. Please be sure to copy the data to PC in Room G (5F, Room 503) in the morning of the session date.

Data submission for YIA presentations

Open hour: Dec. 2, 9:00-12:00

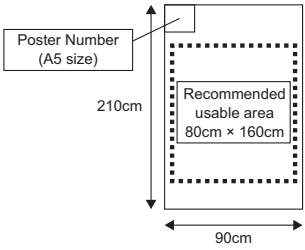
Place: Room G (5F, Room 503)

For Session Chairs

Please make sure to be in the session room and notify the conference staff at least 20 minutes before the session starts. We are grateful for your cooperation to respect strictly the timing assigned to the session.

Instruction for Poster Sessions

Poster Sessions will be held in Kobe International Exhibition Hall.



Each poster presentation is allotted one poster board as shown left.
All presenters for Poster Sessions are responsible for mounting and removing their own posters on the designated poster board with the pins which will be available at the Poster Room.
Any other equipment or electricity for use of image/video projection will not be provided.

Schedule

	Mounting	Core Time		Removal
		Odd Numbers	Even Numbers	
Poster 1	Dec. 2 (Mon.) 9:00-12:00	Dec. 2 (Mon.) 17:45-18:30	Dec. 2 (Mon.) 18:30-19:15	Dec. 4 (Wed.) 19:00 -19:30
Poster 2		Dec. 3 (Tue.) 17:45-18:30	Dec. 3 (Tue.) 18:30-19:15	
Poster 3		Dec. 4 (Wed.) 17:30-18:15	Dec. 4 (Wed.) 18:15-19:00	

Posters remaining after the removal due time will be removed and disposed by the Secretariat.

List of categories and presentation date is shown in next page.

List of Poster Categories and Session date (assigned date are marked by "✓".)

Category		No	Poster 1 Dec 2	Poster 2 Dec 3	Poster 3 Dec 4
A) Sources and Products	Fermented Foods and Beverages	PA01	✓		
	Fruits and Vegetables	PA02	✓		
	Herbs and Spices	PA03			✓
	Japanese Diet	PA04	✓		
	Marine Products	PA05	✓		
	Soy and Legumes	PA06			✓
	Tea, Coffee and Cocoa	PA07	✓		
	Others	PA08			✓
B) Food Factors	Amino Acids	PB01	✓		
	Carbohydrates	PB02			✓
	Carotenoids	PB03		✓	
	Lipids	PB04	✓		
	Minerals	PB05		✓	
	Peptides and Proteins	PB06		✓	
	Polyphenols and Antioxidants	PB07			✓
	Probiotics and Prebiotics	PB08			✓
	Sulfur Compounds	PB09	✓		
	Vitamins	PB10		✓	
	Others	PB11		✓	
C) Functions and Mechanisms	Allergy and Immune Modulation	PC01		✓	
	Anti-inflammation	PC02		✓	
	Autophagy	PC03		✓	
	Bioavailability and Metabolism	PC04	✓		
	Bone Health	PC05			✓
	Brain Health	PC06		✓	
	Cancer Chemoprevention	PC07	✓		
	Cardiovascular Health	PC08	✓		
	Chronobiology	PC09			✓
	Exercise and Skeletal Muscle Health	PC10			✓
	Exosome and microRNA	PC11			✓
	Gastrointestinal Health and Diseases	PC12		✓	
	Metabolic Syndrome, Obesity and Diabetes	PC13	✓		
	Molecular Targets of Food Factors	PC14		✓	
	Nutritional Regulation of Epigenetics	PC15		✓	
	Protein Modification by Food Factors	PC16			✓
	Redox Regulation	PC17		✓	
	Skin Health	PC18	✓		
	Others	PC19			✓
D) Others	Analytical Methods and Omics Technologies	PD01		✓	
	Animal Cell Technology	PD02		✓	
	Biomarkers	PD03		✓	
	Epidemiology	PD04		✓	
	Food Hygienics	PD05			✓
	Food Processing	PD06			✓
	R&D of Functional Foods and Nutraceuticals	PD07		✓	
	Taste and Olfaction	PD08			✓
	Others	PD09			✓

December 1

ICoFF Pre-symposium 10:00-11:30 Room B

ICPH2019 Symposium 15 / Co-organized by Royal Society of Chemistry

Polyphenols: The road from plants to functional foods

Chairs: Christine Morand (Natl. Inst. for Agric. Res. (INRA), France)
Kevin D. Croft (Univ. of Western Australia, Australia)

10:00 **Introduction**

PSY-1 **Polyphenols and digestion process: Targeting the multiple gut functionalities**
10:05 Vincenzo Fogliano
Food Quality and Design group, Wageningen Univ., The Netherlands

PSY-2 **Bioavailability of cocoa flavan-3-ols**
10:25 Alan Crozier[1], Javier Ottaviani[2], Colin Kay[3], Chris Gill[4], Reedmond Fong[1], Gina Borges[1], Hagen Schroeter[2]
[1]Univ. of California, USA, [2]Mars Inc, McLean, USA, [3]North Carolina State Univ., USA, [4]Univ. of Ulster, Northern Ireland, UK

PSY-3 **Vascular health benefits of high flavonoid apples**
10:45 Jonathan M. Hodgson
Sch. of Med. and Health Sci., Edith Cowan Univ., Australia

PSY-4 **Identification of the biochemical mechanisms involved in the health benefits**
11:05 **of plant (poly)phenols**
Cesar G. Fraga[1,2,3]
[1]Fisicoquímica, Facultad de Farmacia y Bioquímica, Universidad de Buenos Aires, Argentina, [2]CONICET-Universidad de Buenos Aire, IBIMOL, Argentina, [3]Dept. of Nutr., Univ. of California, USA

11:25 **Closing Remarks**

Special Lecture 12:45-13:30 Room B

SL **Best practices for success in publishing your work in AJP - endocrinology &**
12:45 **metabolism**
André Marette[1,2]
[1]Editor-in-Chief, AJP: Endocrinology and Metab., USA, [2]IUCPQ and INAF Res. Centers, Laval Univ., Canada

Joint Keynote Lectures 14:00-17:45 Portopia Hall

ICoFF/ICPH/ISNFF Joint Session

Starter: Hitoshi Ashida (Kobe Univ., Japan)

Chair: Akira Murakami (Univ. of Hyogo, Japan)

KL1 **Anticarcinogenic and chemopreventive substances in food: An update**
14:00 Young-Joon Surh
Coll. of Pharm., Seoul Natl. Univ., Korea

Chair: Naomi Osakabe (Shibaura Inst. of Technol., Japan)

KL2 **Cancer prevention by food-derived phytochemicals**
14:35 Zigang Dong
The Hormel Inst., Univ. of Minnesota, USA

Chair: Hiroshige Itakura (Shinagawa Eastone Medical Clinic, Japan)

KL3 **Novel physiological function of bile acid and a food factor that mimics its**
15:10 **function**
Ryuichiro Sato
Dept. of Appl. Biol. Chem., Grad. Sch. of Agric. Life Sci., Univ. of Tokyo, Japan

Intermission

Chair: Kayoko Shimoi (Univ. of Shizuoka, Japan)

KL4 **Contribution of plant food bioactives in promoting health effects of plant**
16:00 **foods – why look at interindividual variability?**
Christine Morand
Université Clermont Auvergne, INRA, UNH, Unité de Nutr. Humaine, France

Chair: Junji Terao (Konan Women's Univ., Japan)

KL5 **Dietary polyphenols for cardiovascular health**
16:35 Kevin D. Croft
Sch. of Biomedical Sci., Univ. of Western Australia, Australia

Chair: Kenji Sato (Kyoto Univ., Japan)

KL6 **Phenolipids in food: bioactivities and health effects**
17:10 Fereidoon Shahidi
Dept. of Biochem., Memorial Univ. of Newfoundland, Canada

Opening Ceremony & Opening Lecture 17:45-18:30 Portopia Hall

Chair: Tsutomu Nakayama (Tokyo Univ. of Agric., Japan)

OL **Development and application of novel biomarkers for human studies of**
17:45 **functional food factors**
Toshihiko Osawa[1,2]
[1]Dept. of Health & Nutr., Fac. of Psyc. Phys. Sci, Aichi Gakuin Univ., Japan, [2]Dept. of Health Food Sci., Fac. of Human Sci., Univ. of Human Arts & Sci., Japan

December 2

Plenary Lectures 1 & 2 — 8:30-9:30 Room A

Chair: Kenji Sato (Kyoto Univ., Japan)

PL1 8:30 **Prevention of NCD by marine nutraceuticals and the future direction**
Kazuo Miyashita
Dept. of Bioresour. Chem., Fac. of Fish. Sci., Hokkaido Univ., Japan

Chair: Akira Murakami (Univ. of Hyogo, Japan)

PL2 9:00 **Linking chemical measurements with sensorial correlates to understand consumer liking and product quality**
Alyson E. Mitchell[1], Lillian Franklin[1], Dawn Chapman[2], Guangwei Huang[3]
[1]Dept. Food Sci. & Tech., Univ. of California, USA, [2]Covance Food Solutions, USA, [3]Almond Board of California, USA

Symposium 1 — 10:00-12:00 Room A

Washoku – Traditional Japanese Cuisine

Organizer: Tsuyoshi Tsuduki (Tohoku Univ., Japan)
Chairs: Hanae Yamazaki (Ryukoku Univ., Japan)
Tsuyoshi Tsuduki (Tohoku Univ., Japan)

10:00 **Overview**

SY01-1 10:01 **Biochemical efficacy of Washoku ~ anti-oxidant, anti-glycation aspects of Washoku ~**
Mitsuko Itoh[1,2,3]
[1]Dept. of Pediatrics, The Univ. of Tokyo Hosp., Japan, [2]Dept. of Public Health/Health Policy, The Univ. of Tokyo, Grad. Sch. of Med., Japan, [3]Akasaka Family Clinic, Japan

SY01-2 10:30 **The effects of Dashi (Japanese soup) on mood states and autonomic nervous system activity**
Hanae Yamazaki
Dept. of Food Sci. and Human Nutr., Fac. of Agric., Ryukoku Univ., Japan

SY01-3 10:59 **Dietary approach for the prevention of cognitive decline and frailty: Findings from a longitudinal epidemiological study among Japanese**
Rei Otsuka[1], Hidenori Arai[2]
[1]Section of NILS-LSA, Cent. for Gerontology and Soc. Sci., Natl. Cent. for Geriatrics and Gerontology, Japan, [2]Natl. Cent. for Geriatrics and Gerontology, Japan

SY01-4 Local and regional Japanese cooking –Many washokus?–
11:28 Greg de St. Maurice
Fac. of Business and Commerce, Keio Univ., Japan

11:57 **Closing Remarks**

Symposium 2 10:00-12:00 Room B

Nutritional Challenges & Potential Health Benefits of Functional Foods, Nutraceuticals & Dietary Supplements

Organizers: Harunobu Amagase (Hiroshima Univ., Japan)
Norio Yamamoto (House Wellness Foods Co., Japan)
Chairs: Chi-Tang Ho (Rutgers Univ., USA)
Harunobu Amagase (Hiroshima Univ., Japan)

SY02-1 Comparison of food functionality, nutrition claims and labeling rule applied
10:00 **to the consumer products in Japan and US**
Harunobu Amagase[1,2,3]
[1]Hiroshima Univ., Japan, [2]Tohoku Univ., Japan, [3]Association of Intl. Food and Nutr. (AIFN), Japan

SY02-2 Health benefits of nigerooligosaccharides and its enzymatic bio-
10:20 **production from maltose by α-glucosidase**
Bo Jiang, Xiaoyan Wang
State Key Lab. of Food Sci. and Technol., Jiangnan Univ., China

SY02-3 Polymethoxyflavones from citrus peels as anti-obesity functional food
10:55 **ingredients**
Chi-Tang Ho[1], Shiming Li[1], Min-Hsiung Pan[2]
[1]Dept. of Food Sci., Rutgers Univ., USA, [2]Inst. of Food Sci and Technol., Natl. Taiwan Univ., Taiwan

SY02-4 Potential properties of astaxanthin for anti-atherosclerotic functions
11:20 Hiroshi Yoshida
Dept. of Lab. Med., The Jikei Univ. Kashiwa Hosp., Japan

SY02-5 Lifestyle related changes with partially hydrolyzed guar gum fiber in
11:45 **healthy athletes: Randomized, crossover, placebo-controlled gut microbiome study**
Mahendra P. Kapoor[1], Masaaki Koido[2], Mikiko Kawaguchi[3], Makoto Ozeki[1], Takayuki Mitsuya[1]
[1]Taiyo Kagaku Co. Ltd., Nutr. Div., Japan, [2]Univ. of Tsukuba, Fac. of Health & Sport Sci., Japan, [3]Otsuma Women's Univ., Fac. of Home Economics, Japan

Symposium 3 10:00-12:00 Room C

Fruits & Vegetables: Health Beneficial Components and High-Value-Added Products

Organizers: Minoru Sugiura (Doshisha Women's Coll. of Liberal Arts, Japan)
Jae-Hak Moon (Chonnam Natl. Univ., Korea)
Yasujiro Morimitsu (Ochanomizu Univ., Japan)

Chairs: Akira Yano (Iwate Biotechnol. Res. Cent., Japan)
Mariusz K. Piskula (Polish Academy of Sciences, Poland)
Yasujiro Morimitsu (Ochanomizu Univ., Japan)

10:00 **Opening Remarks**

SY03-1 10:05 **Does β-cryptoxanthin prevent lifestyle –related diseases?-Findings from the recent nutritional epidemiologic survey–**
Minoru Sugiura
Dept. of Food Sci. and Nutr., Doshisha Women's Coll. of Liberal Arts, Japan

SY03-2 10:25 **Absorption and metabolism of phenolic acids contained in pear *(Pyrus pyrifoloia)***
Jae-Hak Moon, Jeong-Yong Cho
Dept. of Food Sci. and Tech., Chonnam Natl. Univ., Korea

SY03-3 10:45 **Betalains in plasma and urine after a long-term exposure to fermented red beet juice**
Mariusz K. Piskula[1], Ewa Romaszko[2], Wieslaw Wiczkowski[1]
[1]Inst. of Animal Reproduction and Food Res., Polish Academy of Sciences, Poland, [2]NZOZ Atarax Outpatient Clinic, Poland

SY03-4 11:05 **Breeding high nutritious vegetable varieties and construction of value chains**
Naoki Tominaga
Physiol. and Biochem. Res. Div.,Takii & Co.,Ltd, Japan

SY03-5 11:25 **"The Winter Sweet Spinach" as a functional food**
Akira Yano
Dept. of Bioresource Sci., Iwate Biotechnol. Res. Cent., Japan

SY03-6 11:45 **Effect of different elicitors in the carotenoid metabolism of butterhead lettuce *(Lactuca sativa var. capitata)* cultivated under hydroponic conditions**
F.E. Jimenez-Hernandez, de la Rosa L.A. Gonzalez-Fernandez R.[1]
E. Álvarez-Parrilla[1], J. Valero-Galván, J. Rodrigo-Garcia[2]
[1]Dept. Ciencias Químico Biológicas, Instituto de Ciencias Biomédicas, Universidad Autónoma de Ciudad Juárez, México
[2]Dept. Ciencias de la Salud, Instituto de Ciencias Biomédicas, Universidad Autónoma de Ciudad Juárez, México

11:55 **Closing Remarks**

Symposium 4 10:00-12:00 Room D

Absorption, Bioavailability & Metabolism

The Biological Responses against Inter/Intra Environment Research Association/ICoFF Joint Symposium

Organizers: Hideo Satsu (Maebashi Inst. of Technol., Japan)
Yoichi Sakakibara (Univ. of Miyazaki, Japan)
Ming Hu (Univ. of Huston, USA)
Chairs: Shinichi Ikushiro (Toyama Pref Univ., Japan)
Miyu Nishikawa (Toyama Pref. Univ., Japan)

10:00 **Overview**

SY04-1 10:05 **Redefining enterohepatic recycling of flavonoids and polyphenols: Impact on systemic and local exposure**
Ming Hu
Univ. of Houston, Coll. of Pharm., USA

SY04-2 10:35 **Comparative evaluation of glucuronide regio-isomers of polyphenols**
Miyu Nishikawa[1], Kaori Yasuda[2], Toshiyuki Sakaki[2], Shinichi Ikushiro[1]
[1]Fac. of Biotech., Dept. of Engineer., Toyama Pref. Univ., Japan, [2]Fac. of Pharm., Dept. of Engineer., Toyama Pref. Univ., Japan

SY04-3 11:00 **Systemic network for phosphate homeostasis in the body**
Hiroko Segawa, Ichiro Kaneko, Ken-ichi Miyamoto
Dept. of Appl. Nutr., Inst. Biomed. Sci., Tokushima Univ. Grad. Sch., Japan

SY04-4 11:30 **Bioavailability of 12 isoflavones of soybean [*Glycine max* (L.) Merr] using simulated digestion and human intestinal Caco-2 cells**
Mi-Seon Kim[1], Davin Jang[1], Young S. Jung[1], Hong-Sik Kim[2], Nam S. Han[3], Dae-Ok Kim[1]
[1]Dept. of Food Sci. and Biotechnol., Kyung Hee Univ., Korea, [2]Upland Crop Breed. Res. Div., Natl. of Crop Sci., RDA, Korea, [3]BK21 Cent. for Bio-Resour. Dev., Div. of Anim., Hortic. and Food Sci., Chungbuk Natl. Univ., Korea

SY04-5 11:45 **Absorption and metabolic behavior of hesperidin (rutinosylated hesperetin) after single oral administration to Sprague-Dawley rat**
Alexia Nectoux[1], Chizumi Abe[1], Shu-Wei Huang[1], Naoto Ohno[1], Haruo Yamamura[2], Toshiro Matsui[1]
[1]Dept. of Biosci. and Biotechnol., Div. of Biores. and Bioenviron. Sci., Grad. Sch. of Agric., Kyushu Univ., Japan, [2]Charle Co., Japan

Symposium 5 10:00-12:00 Room E

Supported by J-OIL MILLS, INC.

Functional Lipids

Organizers & Chairs: Suk-Hoo Yoon (Woosuk Univ., Korea)
Masao Yamasaki (Univ. of Miyazaki, Japan)
Tatsuya Sugawara (Kyoto Univ., Japan)

SY05-1 Control of skin microbiome with fatty acids
10:00 Toshihiro Nagao[1], Ayaka Uyama[2], Shigemitsu Tanaka[1], Teizo Sugino[2]
[1]Osaka Res. Inst. of Ind. Sci. and Technol., Japan, [2]Momotani Juntenkan Ltd., Japan

SY05-2 Omega3-PUFA containing glycerolipids in metabolic syndrome
10:20 Koji Nagao
Appl. Biochem. Food Sci. Course, Fac. of Agric., Saga Univ., Japan

SY05-3 Importance of intestinal OEA signaling on lipid absorption and feeding behavior
10:40 Miki Igarashi
Tokyo Univ. of Agric. and Technol., Japan

SY05-4 Functional lipid production from food-derived oil using intestinal bacteria
11:00 Shigenobu Kishino, Jun Ogawa
Div. of Appl. Life Sci, Grad. Sch. of Agric., Kyoto Univ., Japan

SY05-5 Oxidative stabilization and destabilization of bioactive lipids by natural antioxidant
11:20 Suk-Hoo Yoon
Dept. Food Sci. Biotechnol. Woosuk Univ., Korea

SY05-6 The effect of tea polyphenols on the antioxidant role of goose intestinal epithelial cells
11:40 Jing Fu[1,2], Tong Lin[3], Chunpeng Liu[1,2], Yunbo Tian[1,2]
[1]Coll. of Animal Sci., Zhongkai Univ. of Agric. and Eng., China, [2]Guangdong Province Key Lab. of Waterfowl Healthy Breeding, China, [3]Coll. of Animal Sci. and Technol., Northeast Agric. Univ., China

Symposium 6 10:00-12:00 Room F

Sponsored by San-Ei Gen F.F.I.,Inc.

The Effects of Highly Bioavailable Quercetin Glycoside and Curcumin

Chair: Hideyuki Orikoshi (San-Ei Gen F.F.I., Inc., Japan)

SY06-1 Anti-dyslipidemia effect and its mechanism by amorphous curcumin

10:00 Tomohiro Nakao[1,2], Kazuya Nagano[2,3], Keigo Kinoshita[1], Makoto Sakata[1], Masayuki Nishino[1], Hirofumi Tsujino[2], Kazuma Higashisaka[2,3], Yasuo Tsutsumi[2,3,4]

[1]San-Ei Gen F. F. I., Japan, [2]Grad. Sch. Pharm. Sci., Osaka Univ., Japan, [3]Grad. Sch. Med., Osaka Univ., Japan, [4]MEIC, Osaka Univ., Japan

SY06-2 Developmental exposure effect of polyphenolic antioxidants on central nervous system

10:30 Makoto Shibutani, Rena Okada, Takaharu Tanaka, Yasunori Masubuchi, Junta Nakahara

Lab. of Vet., Pathol., Div. of Anim. Life Sci., Inst. of Agric.,Tokyo Univ. of Agric. Tech., Japan

SY06-3 Flavonoids for allergic diseases

11:00 Toshio Tanaka[1,2]

[1]Dept. of Clinical Application of Biologics, Osaka Univ. Grad. Sch. of Med., Japan, [2]Medical Affairs Bureau, Osaka Habikino Med. Cent., Japan

SY06-4 Enzymatically modified isoquercitrin (EMIQ®) improves endothelial function in volunteers at risk of cardiovascular disease

11:30 Kevin D. Croft[1], Nicola P. Bondonno[1,2], Catherine P. Bondonno[1,2], Natalie C. Ward[1,3], Richard J. Woodman[4], Jonathan M. Hodgson[1,2]

[1]Sch. of Biomed. Sci., Univ. of Western Australia, Royal Perth Hosp., Australia, [2]Sch. of Med. and Health Sci., Edith Cowan Univ., Australia, [3]Sch. of Public Health and Curtin Health Innovation Res. Inst., Curtin Univ., Australia, [4]Centre. for Epidemiol. and Biostatistics, Sch. of Public Health, Flinders Univ. of South Australia, Australia

Symposium 7 13:30-15:00 Room A

Co-organized by the Japanese Society for Amino Acid Sciences

Bioactive Amino Acids & Proteins

Organizers: Yoshiharu Shimomura (Chubu Univ., Japan)
Ara Koh (Univ. of Gothenburg, Sweden)
Chairs: Yoshiharu Shimomura (Chubu Univ., Japan)
Tsutomu Fukuwatari (Univ. of Shiga Pref., Japan)
Hideo Satsu (Maebashi Inst. of Technol., Japan)

SY07-1 Mechanistic studies of microbially produced imidazole propionate on the
13:30 **host signaling pathway**
Ara Koh[1], Fredrik Bäckhed[1,2]
[1]Univ. of Gothenburg and Sahlgrenska Univ. Hosp., Sweden, [2]Univ. of Copenhagen, Denmark

SY07-2 Sarcopenia and amino acid nutrition
13:55 Hisamine Kobayashi
Business Strategy & Planning Dept. AminoScience Div., Ajinomoto Co., Inc., Japan

SY07-3 Should taurine be rich in heart and muscle for longevity?
14:20 Takashi Ito[1], Stephen W. Schaffer[2]
[1]Grad. Sch. of Biosci. Biotechnol., Fukui Pref. Univ., Japan, [2]Coll. of Med., Univ. of South Alabama, USA

SY07-4 Identification and safety evaluation of hydroxymethylfurfural-amino acid
14:45 **adducts in thermal processing food**
Shiyi Ou, Jie Zheng
Dept. of Food Sci. and Eng., Jinan Univ., China

Symposium 8 13:30-15:00 Room B

Cardiovascular Health

Organizers: Harumi Kondo (Nihon Univ., Japan)
Katsuko Kajiya (Kagoshima Univ., Japan)
Chairs: Cesarettin Alasalvar (TÜBİTAK MAM, Turkey)
Sei Kobayashi (Yamaguchi Univ., Japan)

SY08-1 Nuts and cardiovascular health
13:30 Cesarettin Alasalvar
TÜBITAK MAM Food Inst., Turkey

SY08-2 Green tea and cardiovascular disease
13:50 Yukihiko Momiyama[1], Yoshimi Kishimoto[2], Kazuo Kondo[2]
[1]Dept. of Cardiol., Natl. Hosp. Organization Tokyo Med. Cent., Japan, [2]Endowed Res. Dept. "Food for Health", Ochanomizu Univ., Japan

SY08-3 Is salmon stomach a good remedy for heart failure prevention? –Don't throw away and do eat salmon stomach–
14:10
Hiroyuki Kaiya[1], Minoru Kihara[2], Hidekazu Katayama[3], Masazumi Nishikawa[4]
[1]Dept. of Biochem., Natl. Cereb. Cardiovascul. Cntr. Res. Inst., Japan, [2]Sch. of Biol. Sci., Tokai Univ., Japan, [3]Sch. of Eng., Tokai Univ., Japan, [4]Sch. of Food Agric. and Environ. Sci., Miyagi Univ., Japan

SY08-4 Discovery of food components which inhibits novel signaling molecules regulating both vasospasm and cancer cell migration
14:30
Sei Kobayashi, Bochao Lyu, Min Zhang, Ying Zhang, Hiroko Kishi, Tomoka Morita, Katsuko Kajiya
Dept. of Molecular and Cellular Physiol., Yamaguchi Univ. Grad. Sch. of Med., Japan

SY08-5 Achieving successful outcomes and hallmarks of quality clinical trials
14:50
Najla Guthrie
KGK Sci., Canada

Symposium 9 13:30-15:00 Room C

Marine Products

Organizer: Masashi Hosokawa (Hokkaido Univ., Japan)
Chairs: Meng-Tsan Chiang (National Taiwan Ocean Univ., Taiwan)
Masashi Hosokawa (Hokkaido Univ., Japan)

SY09-1 Chitosan ameliorates fatty liver in high-fat diet-fed rats
13:30
Meng-Tsan Chiang[1], Shing-Hwa Liu[2], Ching-Ming Shi[1], Chen-Yuan Chiu[3]
[1]Dept. of Food Sci., Coll. of Life Sci., Natl. Taiwan Ocean Univ., Taiwan, [2]Grad. Inst. of Toxicology, Coll. of Med., Natl. Taiwan Univ., Taiwan, [3]Inst. of Food Safety and Health, Coll. of Public Health, Natl. Taiwan Univ., Taiwan

SY09-2 Role of functional lipids in preventing obesity-related diseases –Focus on minor compounds in common marine products–
13:55
Fumiaki Beppu[1], Naohiro Gotoh[2]
[1]Fac. of Fish. Sci., Hokkaido Univ., Japan, [2]Dept. of Food Sci. and Technol., Tokyo Univ. of Marine Sci. and Technol., Japan

SY09-3 Imidazole dipeptide, Deoxyribonucleic acid, and Salmon milt peptides – Development of functional foods from marine under-utilized resources –
14:20
Yoshinori Takahashi
Cent. Res. Inst., Maruha Nichiro Co., Japan

SY09-4 Neuroprotective effects of phlorotannin-rich fraction *ecklonia cava* on hydrogen peroxide-induced apoptosis in PC-12 cells
14:45
Yong Sub Shin[1], Mi-Gi Lee[2], Soo-Im Choi[3], Gun-Hee Kim[3], Sueungmok Cho[4], Ho Jin Heo[5], Dae-Ok Kim[1]
[1]Kyung hee Univ., Korea, [2]GBSA, Korea, [3]Duksung Women's Univ., Korea, [4]Pukyong Natl Univ., Korea, [5]Gyeongsang Natl Univ., Korea

Symposium 10 13:30-15:00 Room D

Fermented Foods & Beverages

Organizers & Chairs: De-Xing Hou (Kagoshima Univ., Japan)
Yelian Miao (Nanjing Tech Univ., China)

13:30 **Overview**

SY10-1 13:35 **Production of high-quality frozen dough by the combination of freeze-tolerant baker's yeast and chemical leavening agents**
Yelian Miao[1], Na Li[1], Li Xing[1], Yanping Zhang[2], Fa Lu[3]
[1]Coll. of Food Sci. and Light Ind. Tech., Nanjing Tech Univ., China, [2]Danyang Tongle Flour Co., Ltd., China, [3]Biotech. Res. Inst., Angel Yeast Co., Ltd., China

SY10-2 14:00 **Health benefits of "*Shochu*," a Japanese traditional spirit**
Kayu Okutsu
Fac. of Agric., Education and Res. Cent. for Frementation Studies, Kagoshima Univ., Japan

SY10-3 14:20 **Development of food materials focusing on the fungus body of *koji* mold and its analysis of physiological functions**
Toshiki Kosakai[1], Cho Sho[1], Kuniaki Kawano[1], Masao Yamasaki[2], Ken-ichi Iwai[1]
[1]Kirishima Shuzo Co., Ltd., Japan, [2]Grad. Sch. of Agric., Univ. of Miyazaki, Japan

SY10-4 14:40 **Metabolomics-based research for the classification of tempe from different regions and production processes in Indonesia**
Adinda D. Kadar[1], Pingkan Aditiawati[2], Made Astawan[3], Sastia P. Putri[1], Eiichiro Fukusaki[1]
[1]Dept. of Biotech., Grad. Sch. of Eng., Osaka Univ., Japan, [2]Dept. of Biotech., Sch. of Life Sci. and Tech., Institut Teknologi Bandung, Indonesia, [3]Dept. of Food Sci. and Tech., Fac. of Agric. Tech. and Eng., Bogor Agric. Univ., Indonesia

14:55 **Closing Remarks**

Symposium 11 13:30-15:00 Room E

Skin Health

Organizers: Jolon M. Dyer (Univ. of Canterbury, New Zealand)
Daiki Murase (Kao Co., Japan)
Kentaro Naito (DHC, Japan)
Chairs: Daiki Murase (Kao Co., Japan)
Kentaro Naito (DHC, Japan)

SY11-1 13:30 **Stem cells in solar lentigines (SLs)**
Takaaki Yamada
Res. Laboratories, Nippon Menard Cosmetic Co., Ltd, Japan

SY11-2 Tracking modification in fibrous proteins with redox proteomics: application to the protection & repair of hair and skin

13:48 Jolon M. Dyer[1,2,3,4]

[1]Food & Bio-Based Products, AgResearch, New Zealand, [2]Riddet Inst. based at Massey Univ., New Zealand, [3]Biomolecular Interaction Centre, Univ. of Canterbury, New Zealand, [4]Wine, Food and Mol. Biosci., Lincoln Univ., New Zealand

SY11-3 Skin color control by targeting pigment transport

14:06 Kentaro Naito

Fundamental Res. Lab., DHC Co., Japan

SY11-4 Role of autophagy in skin homeostasis

14:24 Daiki Murase

Biological Sci. Res., Kao Co., Japan

SY11-5 Peptide extracts from Dadih, the Indonesian fermented buffalo milk, protect against skin photoaging *in vivo*

14:42 Yanti[1], Jocelin Muliawan[2], Bibiana Widiyati Lay[2]

[1]Dept. of Food Technol., Atma Jaya Catholic Univ. of Indonesia, Indonesia, [2]Dept. of Biol., Atma Jaya Catholic Univ. of Indonesia, Indonesia

YIA Final Competition 1 13:30-15:00 Room F

Chairs: Yoko Yamashita (Kobe Univ., Japan)
Noriyuki Miyoshi (Univ. of Shizuoka, Japan)
Kyuichi Kawabata (Konan Women's Univ., Japan)
Michiko T. Yasuda (Sugiyama Jogakuen Univ., Japan)

13:30 **Opening Remarks**

YIA-01 (SY10-4) Metabolomics-based research for the classification of tempe from differentregions and production processes in Indonesia

13:35 Adinda D. Kadar[1], Pingkan Aditiawati[2], Made Astawan[3], Sastia P. Putri[1], Eiichiro Fukusaki[1]

[1]Dept. of Biotech., Grad. Sch. of Eng., Osaka Univ., Japan, [2]Dept. of Biotech., Sch. of Life Sci. and Tech., Institut Teknologi Bandung, Indonesia, [3]Dept. of Food Sci. and Tech., Fac. of Agric. Tech. and Eng., Bogor Agric. Univ., Indonesia

YIA-02 (SY54-6) Effects of a carbohydrate-restricted diet on aging in senescence-accelerated prone mice

13:40 Chaoqi He, Qiming Wu, Tsuyoshi Tsuduki

Tohoku Univ., Japan

YIA-03 (SY38-6) Lean male and female mice respond differently to increasing dietary intake of high amylose wheat

13:45 See Meng Lim[1,3,4], Amanda Page[2,3], Hui Li[2,3], John Carragher[1], Iain Searle[1], Sarah Robertson[2], Beverly Muhlhausler[1,3,5]

[1]Fac. of Sci., The Univ. of Adelaide, Australia, [2]Fac. of Health and Med. Sci., The Univ. of Adelaide, Australia, [3]South Australian Health and Med. Res. Inst., Australia, [4]Cent. for Community Health, Fac. of Health Sci., Universiti Kebangsaan Malaysia, Malaysia, [5]Commonwealth Sci. and Ind. Res. Organisation, Australia

YIA-04 (PB0105) γ-Aminobutyric acid induces biosynthesis of a novel imidazole peptide in skeletal muscle

13:50 Kanako Sato[1], Takeshi Arima[2], Takumi Komaru[3], Noriyuki Yanaka[1], Mikako Sato[4], Yasuyuki Oishi[4], Thanachaporn Kumrungsee[1]

[1]Grad. Sch. of Integ. Sci. for Life, Hiroshima Univ., Japan, [2]Grad. Sch. of Biosphere Sci., Hiroshima Univ., Japan, [3]Sch. of Appl. Biosci., Hiroshima Univ., Japan, [4]R&D Cent., NH Foods Ltd., Japan

YIA-05 (PB0104) The mechanism of FGF21-induced suppression of liver lipid accumulation during protein malnutrition

13:55 Hiroki Kosaka[1], Yori Ozaki-Masuzawa[2], Rino Abiru[2], Keigo Kawate[2], Yuki Kohno[2], Atsushi Miura[1,2], Morichika Konishi[3], Nobuyuki Itoh[4], Asako Takenaka[5], Takashi Hosono[1,2], Taiichiro Seki[1,2]

[1]Dept. of Appl. Life Sci., Grad. Sch. of Bioresour. Sci., Nihon Univ., Japan, [2]Dept. of Chem. and Life Sci., Coll. of Bioresour. Sci., Nihon Univ., Japan, [3]Lab. of Microbial Chem., Kobe Pharm. Univ., Japan, [4]Dept. of Genetic Biochem., Kyoto Univ. Grad. Sch. of Pharm. Sci., Japan, [5]Dept. Agric. Chem., Sch. of Agric., Meiji Univ., Japan

YIA-06 (PB0401) Precise analysis of plant sterols in human blood and search for factors related to its concentration

14:00 Eriko Nakatsukasa, Tsuyoshi Tsuduki

Grad. Sch. of Agric., Tohoku Univ., Japan

YIA-07 (PB0612) Dipeptides can transport across the blood-brain barrier in mouse brain

14:05 Hayato Kiyohara[1], Mitsuru Tanaka[1], Shinya Dohgu[2], Genki Komabayashi[1], Fuyuko Takata[2], Yasufumi Kataoka[2], Takashi Nirasawa[3], Toshiro Matsui[1]

[1]Div. of Biores. and Bioenviron. Sci., Grad. Sch. of Agric. Sci., Kyushu Univ., Japan, [2]Div. of Pharm. Care and Health Sci., Fukuoka Univ., Japan, [3]Bruker Japan K.K., Japan

YIA-08 (SY18-5) Absorption of Cblin oligopeptide across Caco-2 cell monolayers and rat intestinal membrane

14:10 Weilin Shen[1], Mitsuru Tanaka[1], Reiko Nakao[2], Takeshi Nikawa[2], Toshiro Matsui[1]

[1]Dept. of Biosci. Biotechnol., Grad. Sch. of Agric., Kyushu Univ., Japan, [2]Dept. of Nutr. Physiol., Inst. of Health Biosci., Tokushima Univ., Japan

YIA-09 (PB0721) Green tea polyphenol EGCG enhances anticoagulation factor TFPI expression by activating 67LR signaling

14:15 Ren Yoshitomi, Hirokatsu Kanzaki, Takuya Takakura, Shigeyuki Totoki, Motofumi Kumazoe, Yoshinori Fujimura, Hirofumi Tachibana

Div. of Appl. Biol. Chem., Grad. Sch. of Bioresour. and Bioenviron. Sci., Kyushu Univ., Japan

YIA-10 (PC0402) **Theasinensin A promotes paracellular transport of hesperidin in Caco-2 cell**
14:20 Chizumi Abe[1], Naoto Ohno[1], Shuwei Huang[1], Alexia Nectoux[1], Haruo Yamamura[2], Toshiro Matsui[1]
[1]Fac. of Agric., Grad. Sch. of Kyushu Univ., Japan, [2]Charle Co., Japan

YIA-11 (PB0810) **The host immunoresponsiveness influences probiotic functions of inulin**
14:25 Yu Arima[1], Kenjiro Shiozawa[2], Masayuki Noguchi[2], Yori Ozaki-Masuzawa[2], Takashi Hosono[1,2], Taiichiro Seki[1,2]
[1]Dept. of Appl. Life Sci., Grad. Sch. of Bioresour. Sci., Nihon Univ., Japan, [2]Dept. of Chem. and Life Sci., Coll. of Bioresour. Sci., Nihon Univ., Japan

YIA-12 (PB0908) **Analysis of mechanism underlying gastric mucosal cell death induced by sodium sulfite**
14:30 Moeri Oshimo, Kenji Kai, Mitsugu Akagawa
Grad. Sch. of Life & Environ. Sci., Osaka Pref. Univ., Japan

YIA-13 (PB0907) **Effects of 6-(methylsulfinyl)hexyl isothiocyanate on induction of aldehyde dehydrogenase in hepatocytes**
14:35 Tomoya Kitakaze, Sihao Yuan, Hitoshi Ashida
Dept. of Agrobiosci., Grad. Sch. of Agric. Sci., Kobe Univ., Japan

YIA-14 (SY32-1) **The exploration of Vitamin K binding protein using the novel fluorescent probes**
14:40 Sho Sano[1], Yuki Ito[1], Maya Kamao[2], Yoshitomo Suhara[1], Yoshihisa Hirota[1]
[1]Syst. Eng. and Sci., Grad. Sch. of Eng. and Sci., Shibaura Inst. of Tech., Japan, [2]Ext. Cent., Kobe Pharm. Univ., Japan

YIA-15 (PB1105) **α-Monoglucosyl hesperidin but not hesperidin induces brown-like adipocyte formation and suppresses white adipose tissue accumulation in mice**
14:45 Takuma Hyodo[1], Sho Nishikawa[1], Tsubasa Nagao[1], Akihito Nakanishi[2], Mahamadou Tandia[2], Takanori Tsuda[1]
[1]Coll. of Biosci. and Biotechnol., Chubu Univ., Japan, [2]Toyo Sugar Refining Co., Ltd., Japan

YIA-16 (SY21-5) **Anti-inflammatory effect of siphonaxanthin and its underlying molecular mechanisms**
14:50 Yuki Manabe[1], Natsuki Hashimoto[1], Toshiro Okazaki[2], Takashi Hirata[1,3], Tatsuya Sugawara[1]
[1]Div. of Appl. Biosci., Grad. Sch. of Agric., Kyoto Univ., Japan, [2]Res. Inst. of Bioresour. Biotech., Ishikawa Pref. Univ., Japan, [3]Shijonawate Gakuen Univ., Japan

Symposium 12 15:30-17:30 Room A

Cancer Chemoprevention

Organizers: Kayoko Shimoi (Univ. of Shizuoka, Japan)
Yoshimasa Nakamura (Okayama Univ., Japan)
Chairs: Kayoko Shimoi (Univ. of Shizuoka, Japan)
Young-Joon Surh (Seoul National Univ., Korea)

15:30 **Overview**

SY12-1 15:40 **Function of carotenoid β-cryptoxanthin: Implications for cancer prevention**
Xiang-Dong Wang
Jean-Mayer United States Dept. of Agric. Human Nutr. Res. Cent. on Aging at Tufts Univ., USA

SY12-2 16:10 **Curcumin exerts anti-inflammatory effects through upregulation of 15-hydroxyprostaglandin dehydrogenase against *Helicobacter pylori* infection**
Hye-Kyung Na
Detp. of Food Sci. and Biotechnol., Coll. of Knowledge-based Service Eng., Sungshin Women's Univ., Korea

SY12-3 16:40 **Inhibition of drug resistance mechanisms ameliorates the benzyl isothiocyanate-induced antiproliferation in human colorectal cancer cells**
Yoshimasa Nakamura
Grad. Sch. Environ. Life Sci., Okayama Univ., Japan

SY12-4 17:00 **Effect of quercetin on regulating cell death and chemosensitivity in human pancreatic cancer cells**
Gow-Chin Yen, Chieh-Yu Lan, Sheng-Yi Chen, Chia-Wen Kuo
Dept. of Food Sci. Biotechnol., Natl. Chung Hsing Univ., Taiwan

SY12-5 17:15 **The Ashitaba (*Angelica keiskei*) chalcones 4-hydroxyderricin and xanthoangelol suppress melanomagenesis by targeting BRAF and PI3-K**
Tianshun Zhang[1], Qiushi Wang[1], Hitoshi Ashida[2], Zigang Dong[1]
[1]The Hormel Inst., Univ. of Minnesota, USA, [2]Dept. of Agrobiosci., Grad. Sch. of Agric. Sci., Kobe Univ., Japan

Symposium 13 15:30-17:30 Room B

Polyphenols : Molecular Mechanisms

Organizers: Toshihiko Shoji (NARO, Japan)
Toshiyuki Nakamura (Okayama Univ., Japan)
Chairs: Francisco A. Tomás-Barberán (CEBAS-CSIC Murcia, Spain)
Yves Desjardins (Laval Univ., Canada)

SY13-1 15:30 **Polyphenols - gut microbiota interactions; understanding the role of polyphenols in human health**
Francisco A. Tomás-Barberán, Rocío García-Villalba, Antonio González-Sarrías, Victoria Selma, Juan C. Espín
Food and Health Lab. Res. Group on Quality, Safety and Bioactivity of Plant Foods, Dept. Food Sci., CEBAS-CSIC Murcia, Spain

SY13-2 16:05 **Polyphenols affect the genetic and morphologic response of *Akkermansia muciniphila* a bacteria playing a central role in the etiology of cardiometabolic disorders**
Yves Desjardins, María-Carolina Rodríguez Daza, Denis Roy
Inst. of Nutr. and Functional Foods (INAF), Laval Univ., Canada

SY13-3 16:40 **Structure-activity relationship of procyanidins on advanced glycation end products formation and corresponding mechanisms**
Qian Wu, Chao Wang
Sch. of Food and Biol. Eng., Hubei Univ. of Technol., China

SY13-4 16:55 **Visualization of absorption and metabolism of polyphenols in rat intestine by nifedipine aided-MALDI-MS imaging**
Mitsuru Tanaka, Tae Hun Ham, Huu-Nghi Nguyen, Toshiro Matsui
Dept. of Biosci. Biotechnol., Fac. of Agric., Grad. Sch. of Kyushu Univ., Japan

SY13-5 17:10 **Flavan 3-ols evoke locus coeruleus- noradrenaline neuron firing**
Yasuyuki Fujii[1], Noriko Nakao[1], Keiko Abe[2], Shu Taira[3], Naomi Osakabe[1]
[1]Dept. of Biosci. and Eng., Shibaura Inst. of Technol., Japan, [2]Dept. of Appl. Biol. Chem., Grad. Sch, of Agric. and Life Sci., Tokyo Univ., Japan, [3]The Fac. of Food and Agric. Sci., Fukushima Univ., Japan

17:25 **Closing Remarks**

Symposium 14 15:30-17:30 Room C

Sulfur Compounds: From Biosynthetic Mechanisms to Its Function at Molecular Basis

Organizers & Chairs: Taiichiro Seki (Nihon Univ., Japan)
Lee Yan Sheen (National Taiwan Univ., Taiwan)

15:30 **Overview**

SY14-1 15:40 **Investigation of the biosynthesis of *S*-alk(en)ylcysteine sulfoxides in the genus *Allium***
Naoko Yoshimoto
Grad. Sch. Pharm. Sci., Chiba Univ., Japan

SY14-2 16:10 **Volatile organosulfur compounds derived from garlic inhibit platelet aggregation through the modification of sulfhydryl groups**
Takashi Hosono
Dept. of Chem. & Life Sci., Coll. of Bioresour. Sci., Nihon Univ., Japan

SY14-3 16:40 **Long-term treatment with garlic essential oil reverses unpredictable chronic mild stress-induced depressive-like behavior via monoaminergic neurotransmission in rat brain**
Yun Ju Huang[1], Lee Yan Sheen[1,2,3]
[1]Inst. of Food Sci. and Technol., Natl. Taiwan Univ., Taiwan, [2]Cent. for Food and Biomol., Natl. Taiwan Univ., Taiwan, [3]Natl. Cent. for Food Safety Education and Res., Natl. Taiwan Univ., Taiwan

SY14-4 17:10 **Taurine chloramine ameliorates experimentally induced colon and skin inflammation**
Seong Hoon Kim[1], So Eui Lee[1,2], Yanymee Nimesia Guillen Quispe[1,2], Do-Hee Kim[1,2], Young-Joon Surh[1,2]
[1]Tumor Microenvironment Global Core Res. Cent., Coll. of Pharm., Seoul Natl. Univ., Korea, [2]Dept. of Mol. Med. and Biopharm. Sci., Seoul Natl. Univ., Korea

Symposium 15 15:30-17:30 Room D

Co-organized by The Society of Tea Science of Japan

Tea

Organizers: Chung S. Yang (Rutgers Univ., USA)
Kazutoshi Sayama (Shizuoka Univ., Japan)
Chairs: Ichiro Tokimitsu (Univ. Human arts Sciences, Japan)
Kazutoshi Sayama (Shizuoka Univ., Japan)

SY15-1 15:30 **Studies on the beneficial health effects of tea**
Chung S. Yang
Dept. of Chem. Biol., Rutgers, The State Univ. of New Jersey, USA

SY15-2 15:55 **Study on suppression of fat accumulation and food intake by green tea and its component.**
Kazutoshi Sayama
Coll. of Agric., Academic Inst., Shizuoka Univ., Japan

SY15-3 16:20 **Green tea extracts enhance energy expenditure to exert their beneficial effects in humans**
Shinichi Meguro
Biological Sci. Res., Kao Co., Japan

SY15-4 16:45 **Epigallocatechin gallate (EGCg) improved diabetic nephropathy through activation of diacylglycerol kinase alpha**
Yasuhito Shirai[1], Daiki Hayashi[2]
[1]Dept. of Agrobiosci., Grad. Sch. of Agric. Sci., Kobe Univ., Japan, [2]Dept. of Chem. and Biochem., UCSD., USA

SY15-5 17:10 **Gut microbiota facilitate tea polyphenols to trap deleterious reactive endogenous metabolites**
Shengmin Sang[1], Shuwei Zhang[1], Christina Ohland[2], Christian Jobin[2]
[1]Lab. for Functional Foods and Human Health, North Carolina A&T State Univ., USA, [2]Dept. of Infectious Dis. and Immunol., Univ. of Florida, USA

Symposium 16 15:30-17:30 Room E

Metabolic Syndrome and Diabetes

Organizers: Hiroshi Yoshida (The Jikei Univ. Sch. of Med., Japan)
Nobuyuki Takahashi (Tokyo Univ. of Agric., Japan)
Rina Yu (Univ. of Ulsan, Korea)
Chairs: Hiroshi Yoshida (The Jikei Univ. Sch. of Med., Japan)
Nobuyuki Takahashi (Tokyo Univ. of Agric., Japan)

SY16-1 15:30 **Mitigation of obesity-related pathologies by dietary cocoa supplementation**
Joshua D. Lambert[1,2]
[1]Dept. of Food Sci., The Pennsylvania State Univ., USA [2]Cent. for Mol. Toxicol. and Carcinogenesis, The Pennsylvania State Univ., USA

SY16-2 15:50 **Extracellular matrix protein, endotrophin contributes to ER stress-linked adipocyte dysfunction in obesity**
Jiyoung Park
Dept. of Biol. Sci., UNIST, Korea

SY16-3 16:10 **Adiponectin in metabolic syndrome and related disorders**
Shinji Kihara
Dept. of Biomed. Informatics, Grad. Sch. of Med, Osaka Univ., Japan

SY16-4 16:30 **Brown rice-specific γ-oryzanol as a promising prophylactic avenue to protect against diabetes mellitus and obesity disease**

Hiroaki Masuzaki[1], Shiki Okamoto[1], Satoru Yamazaki[1], Michio Shimabukuro[2]
[1]Dept. of Med., Grad. Sch. of Med., Univ. of the Ryukyus, Japan, [2]Dept. of Diabetes, Endocrinol. and Metab., Sch. of Med., Fukushima Med. Univ., Japan

SY16-5 16:50 **Ectopic fat depots and cardiometabolic disease: how food factors are linked?**

Michio Shimabukuro
Dept. of Diabetes, Endocrinol. & Metab., Fukushima Med. Univ., Japan

17:10 **Closing Remarks**

YIA Final Competition 2 — 15:30-17:30 Room F

Chairs: Rie Mukai (Tokushima Univ., Japan)
Noriyuki Miyoshi (Univ. of Shizuoka, Japan)
Kyuichi Kawabata (Konan Women's Univ., Japan)
Michiko T. Yasuda (Sugiyama Jogakuen Univ., Japan)

YIA-17 (PC0404) 15:30 **Intestinal absorption of visualized anthocyanins in rats by matrix assisted laser desorption/ionization mass spectrometry imaging technique**

Taehun Ham[1], Huu-Nghi Nguyen[1], Mitsuru Tanaka[1], Ayaka Tsutsumi[2], Qing Qiang Hu[2], Koichi Aizawa[2], Toshiro Matsui[1]
[1]Div. of Biores. Bioenviro. Sci., Grad. Sch. of Agric. Sci., Kyushu Univ., Japan, [2]Res. and Dev., Kagome Inc., Japan

YIA-18 (SY04-5) 15:35 **Absorption and metabolic behavior of hesperidin (rutinosylated hesperetin) after single oral administration to Sprague-Dawley rat**

Alexia M. Nectoux[1], Chizumi Abe[1], Shu-Wei Huang[1], Naoto Ohno[1], Haruo Yamamura[2], Toshiro Matsui[1]
[1]Div. of Biores. and Bioenviron. Sci., Grad. Sch. of Agric., Kyushu Univ., Japan, [2]Charle Co., Japan

YIA-19 (PC0405) 15:40 **Enhanced absorption of prenylated isoflavones in rat circulating bloodstream**

Ye Zhang[1], Kazuhiro Takao[1], Kuni Sasaki[2], Kouji Ochiai[2], Toshiro Matsui[1]
[1]Div. Biores. Bioenvir. Sci., Grad. Sch. of Agric. Kyushu Univ., Japan, [2]Daizu Energy Co. Ltd., Japan

YIA-20 (PC0406) 15:45 **Pharmacokinetics and metabolism of components in Brazilian green propolis after oral administration in humans**

Masayuki Yamaga[1,2], Hiroko Tani[2], Manamu Kitami[3], Shin-ichi Ikushiro[3], Kaeko Murota[4]
[1]Appl. Bioresour Chem., Bioresour and Life Sci., The United Grad. Sch. of Agric. Sci., Tottori Univ., Japan, [2]Inst. for Bee Products and Health Sci., Yamada Bee Co. Inc., Japan, [3]Dep. Biotech., Fac. Engineer, Toyama Pref. Univ., Japan, [4]Dept. Life Sci., Fac. Life Environ. Life Sci., Shimane Univ., Japan

YIA-21 (PC0610) β-Lactolin, a novel whey-derived peptide, improves memory retrieval in a clinical trial and prevents Alzheimer's disease in preclinical studies

15:50 Yasuhisa Ano[1,2], Rena Ohya[1], Masahiro Kita[1], Satoshi Umeda[3], Hiroyuki Nakayama[2]
[1]Res. Lab. for Health Sci and Food Tech., Kirin Holdings, Japan, [2]Grad. Sch. of Agric. and Life Sci., the Univ. of Tokyo, Japan, [3]Dept. Psychol., Keio Univ., Japan

YIA-22 (PB0303) Cognitive function improvement with astaxanthin and tocotrienols intake –A randomized, double-blind, placebo-controlled study–

15:55 Yuki Kizawa[1], Takahiro Sekikawa[1], Yanmei Li[2], Tsuyoshi Takara[3]
[1]BGG Japan Co., Ltd., Japan, [2]Beijing Gingko-Group Biol. Technol. Co., Ltd., China, [3]Med. Co. Seishinkai, Japan

YIA-23 (PC0902) Inhibitory mechanism of polyphenols for the disruption of circadian clock via AhR

16:00 Takuya Nomura[1], Tomoya Kitakaze[2], Yoko Yamashita[2], Hitoshi Ashida[2]
[1]Fac. of Agric., Kobe Univ., Japan, [2]Dept. of Agrobiosci., Grad. Sch. of Agric. Sci., Kobe Univ., Japan

YIA-24 (SY27-5) Altered metabolites related to sarcopenia in the skeletal muscles of aged mice

16:05 Ran Uchitomi[1], Yukino Hatazawa[1], Nanami Senoo[2], Kiyoshi Yoshioka[3], Mariko Fujita[1], Takahiko Shimizu[4], Shinji Miura[2], Yusuke Ono[3], Yasutomi Kamei[1]
[1]Grad. Sch. of Life and Environ. Sci., Kyoto Pref. Univ., Japan, [2]Grad. Sch. of Nutr. and Environ. Sci., Univ. of Shizuoka, Japan, [3]Inst. of Mol. Embryol. and Genet., Kumamoto Univ., Japan, [4]Dept. of Advanced Aging Med., Chiba Univ. Grad. Sch. of Med., Japan

YIA-25 (PC1012) Identification of atrophy-related FOXO1-target genes in skeletal muscle of mice

16:10 Mamoru Oyabu, Kaho Takigawa, Yasutomi Kamei
Grad. Sch. of Life and Environ. Sci., Kyoto Pref. Univ., Japan

YIA-26 (PC1007) Screening of compounds that suppress the transcriptional activity of FOXO1

16:15 Rintaro Matsuda, Takumi Onishi, Yuma Hirose, Yukino Hatazawa, Yasutomi Kamei
Grad. Sch. of Life and Environ. Sci., Kyoto Pref. Univ., Japan

YIA-27 (PC1010) Genistein and daidzein promotes PGC-1β-mediated energy expenditure gene expression in muscle cells

16:20 Shiho Nakai[1], Ran Uchitomi[1], Rintaro Matsuda[1], Takumi Onishi[1], Shinji Miura[2], Yukino Hatazawa[1], Yasutomi Kamei[1]
[1]Grad. Sch. of Life and Environ. Sci., Kyoto Pref. Univ., Japan, [2]Grad. Sch. of Nutr. and Environ. Sci., Univ. of Shizuoka, Japan

YIA-28 (PC1002) Oleamide rescues skeletal muscle atrophy of mice housed in small cages

16:25 Yasuyuki Kobayashi[1], Natsumi Watanabe[1], Tomoya Kitakaze[2], Keiichiro Sugimoto[3,4], Kenji Kai[1], Naoki Harada[1], Ryoichi Yamaji[1]
[1]Div. Appl. Life Sci., Grad. Sch. Life Environ., Osaka Pref. Univ., Japan, [2]Grad. Sch. Agri. Sci., Kobe Univ. Japan, [3]R&D Cent., Nagaoka Co., Ltd., Japan, [4]Cent. R&D Bioresour, Osaka Pref. Univ., Japan

YIA-29 (SY37-5) **A novel antiobesity effect of garlic compound mediated through miRNA**
16:30 Takahiro Watanabe[1], Ayana Ikeda[1], Kiki Seo[1], Atsushi Miura[1,2], Yori Ozaki-Masuzawa[2], Takashi Hosono[1,2], Taiichiro Seki[1,2]
[1]Dept. of Appl. Life Sci., Grad. Sch. of Bioresour. Sci., Nihon Univ., Japan, [2]Dept. of Chem. And Life Sci., Coll. of Bioresour. Sci., Nihon Univ., Japan

YIA-30 (SY17-6) **Suppressive effects of luteolin on serotonin production in RBL-2H3 cells**
16:35 Naoko Suga[1], Hideyuki Arimitsu[1,2], Akira Murakami[1,2], Yoji Kato[1,2]
[1]Grad. Sch. of Human Sci. & Environ., Univ. of Hyogo, Japan, [2]Res. Inst. Food & Nutri. Sci., Univ. of Hyogo, Japan

YIA-31 (PC1207) **Dietary fermentable fibers increase intestinal heat shock protein70 through short chain fatty acids production**
16:40 Adesina Precious Adedayo[1], Takuya Suzuki[1,2]
[1]Dept. of Biofunctional Sci. and Technol., Grad. Sch. of Biosphere Sci., Hiroshima Univ., Japan, [2]Program of Food AgriLife Sci., Grad. Sch. of Integrated Sci. for Life, Hiroshima Univ., Japan

YIA-32 (PC1305) **Study on the relationship between fatty acid metabolism and thermogenic function of white adipocytes**
16:45 Mari Iwase[1], Soshi Tokiwa[1], Shigeto Seno[2], Takako Mukai[3], Haruya Takahashi[1], Wataru Nomura[1], Huei-Fen Jheng[1], Tatsuya Kusudo[3], Naoki Osato[2], Hideo Matsuda[2], Kazuo Inoue[1], Teruo Kawada[1,4], Tsuyoshi Goto[1,4]
[1]Div. of Food Sci. and Biotechnol, Grad. Sch. of Agric., Kyoto Univ., Japan, [2]Dept.of Bioinformatic Eng., Grad. Sch. of Information Sci. and Technol., Osaka Univ., Japan, [3]Fac. of Human Sci., Tezukayama Gakuin Univ., Japan, [4]Res. Unit for Physiol. Chem., Cent. for the Prom. of Interdisciplinary Educ. and Res., Kyoto Univ., Japan

YIA-33 (PC1323) **Artepillin C induces thermogenesis in inguinal white adipose tissues of mice in association with a creatine metabolism-related thermogenic pathway**
16:50 Sho Nishikawa[1], Takuma Hyodo[1], Hiroki Aoyama[1], Ryo Miyata[2], Shigenori Kumazawa[2], Takanori Tsuda[1]
[1]Coll. of Biosci. and Biotech., Chubu Univ., Japan, [2]Dept. of Food and Nutr. Sci., Univ. of Shizuoka, Japan

YIA-34 (SY22-5) **Pyroglutamyl peptides with anti-obesity, which are distributed in Japanese fermented foods, regulate ERK phosphorylation through GPR109A and GPR81**
16:55 Saki Shirako[1], Satoshi Miyauchi[1], Vadivel Ganapathy[2], Kenji Sato[1]
[1]Div. of Appl. Biosci., Grad. Sch. of Agric., Kyoto Univ., Japan, [2]Dept. of Cell Biol. & Biochem., Texas Tech Univ., USA

YIA-35 (PC1902) **Aged garlic extract induces aldehyde dehydrogenase via Nrf2/ARE pathway**
17:00 Masako Inoue, Sihao Yuan, Tomoya Kitakaze, Hitoshi Ashida
Dept. of Agrobiosci., Grad. Sch. of Agric. Sci., Kobe Univ., Japan

YIA-36 (PD0106) **Photodynamic therapy induces differential changes in human breast epithelial cells lipidome**
17:05 Alex Inague, Ancély Ferreira dos Santos, Marcos Yukio Yoshinaga, Leticia Labriola, Sayuri Miyamoto
Dept. of Biochem., Chem. Inst., Univ. of São Paulo, Brazil

YIA-37 (PD0301) Analysis of fecal gaseous metabolites in NASH-hepatocellular carcinoma model mice

17:10 Mai Kato[1], Tsutomu Hashidume[1], Yutaka Shoji[1], Kumiko Shoji[2], Miki Igarashi[3], Sumio Hayakawa[4], Yuko Yoshikawa[1,5], Noriyuki Miyoshi[1]

[1]Grad. Sch. of Integrated Pharm. and Nutr. Sci., Univ. of Shizuoka, Japan, [2]Kagawa Education Inst. of Nutr., Japan, [3]Tokyo Univ. of Agric. and Technol., Japan, [4]Nippon Med. Sch., Japan, [5]Nippon Vet. and Life Sci. Univ., Japan

YIA-38 (SY32-2) Vitamin D deficiency and its associated factors in healthy Malaysian pregnant women

17:15 Siew Siew Lee[1], Su Peng Loh[1], Raman Subramaniam[2], Maiza Tusimin[3], King Hwa Ling[4,5], Kartini Farah Rahim[6]

[1]Dept. of Nutr. & Dietetics, Fac. of Med. & Health Sci., Universiti Putra Malaysia, Malaysia, [2]Fetal Med. & Gynaecology Centre, Malaysia, [3]Dept. of Obstetrics & Gynaecology, Fac. of Med. & Health Sci., Universiti Putra Malaysia, Malaysia, [4]Dept. of Biomedical Sci., Fac. of Med. & Health Sci., Universiti Putra Malaysia, Malaysia, [5]Dept. of Genetics, Harvard Medical Sch., USA, [6]Avisena Specialist Hosp., Malaysia

YIA-39 (PD0726) The prebiotic factors of fresh and chip lesser yam (*Dioscorea esculenta*) by simulation model of human colonic microbiota in batch culture fermentation

17:20 Adrian Hilman[1], Eni Harmayani[2], Muhammad Nur Cahyanto[2], Santad Wichienchot[3]

[1]Dept. of Food Sci. and Tech., Fac. of Agric, Univ. Sumatera Utara, Indonesia, [2]Dept. of Food and Agric. Prod. Tech., Fac. of Agric. Tech., Univ. Gadjah Mada, Indonesia, [3]Interdisc. Grad. Sch. of Nutrac. and Funct. Food, Prince of Songkla Univ., Thailand

YIA-40 (PD0712) Caffeine-induced acute P1 purinergic receptor activation in lacrimal glands leads to upregulation of tear secretion in a mouse model

17:25 Meng-Tien Hsieh[1], Yu-Wen Kao[1], Tsung-Han Lu[1], Chia-Yun Hsu[1], Ya-Jing Liu[1],Han-Hsin Chang[2], David Pei-Cheng Lin[1]

[1]Dept. of Med. Lab. and Biotechnol., Chung Shan Med. Univ., Taiwan, [2]Dept. of Nutr., Chung Shan Med. Univ., Taiwan

December 3

Plenary Lectures 3 & 4 — 8:30-9:30 Room A

Chair: Kazuo Miyashita (Hokkaido Univ., Japan)

PL3 ***Helicobacter pylori*** **infection and food bioactives**
8:30 Chin-Kun Wang
Chung Shan Med. Univ., Taiwan

Chair: Hitomi Kumagai (Nihon Univ., Japan)

PL4 **Impact of calcium-sensing receptor toward to gut health and metabolic**
9:00 **disorders: Conception and bioactive food factors**
Yoshinori Mine
Dept. of Food Sci., Univ. of Guelph, Canada

Symposium 17 — 10:00-12:00 Room A

Role of Foods in Gastrointestinal Health & Diseases

Organizer: Yuji Naito (Kyoto Pref. Univ. Med., Japan)
Chairs: Yuji Naito (Kyoto Pref. Univ. Med., Japan)
Sin-Hyeog Im (Pohang Univ. of Sci. and Technol. (POSTECH), Korea)

SY17-1 **Rationally selected probiotics as immunomodulatory pharmabiotics**
10:00 Sin-Hyeog Im[1,2]
[1]Div. of Integrative Biosci. and Biotechnol., Pohang Univ. of Sci. and Technol. (POSTECH), [2]Dept. of Life Sci., POSTECH, Korea

SY17-2 **Diets and commensal bacteria create gut environment for the**
10:25 **immunological health and diseases**
Jun Kunisawa
Lab. of Vaccine Materials, Cent. for Vaccine and Adjuvant Res. and Lab. of Gut Environ. System, Natl. Inst. of Biomed. Innovation, Health and Nutr. (NIBIOHN), Japan

SY17-3 **Symbiosis and co-evolution between bifidobacteria and humans, driven by**
10:50 **human milk oligosaccharides**
Takane Katayama
Grad. Sch. of Bios., Kyoto Univ., Japan

SY17-4 11:15 **Effects of partially hydrolyzed guar gum, a water soluble dietary fiber, on gut microbiome in stress-related gastrointestinal dysfunction**

Yuji Naito[1], Tomohisa Takagi[1], Ryo Inoue[2], Zenta Yasukawa[3], Makoto Ozeki[3,4], Tsutomu Ohkubo[3,4]

[1]Dept. of Gastroenterol. and Hepatol., Kyoto Pref. Univ. of Med., Japan, [2]Lab. of Animal Sci., Dept. of Agric. and Life Sci, Kyoto Pref. Univ., Japan, [3]Nutr. Div., Taiyo Kagaku Co., Ltd., Japan, [4]Academic-Industrial Grad. Sch., Mie Univ., Japan

SY17-5 11:40 **Aronia berry polyphenols improve barrier function and modulate expression of tight junctions in Caco-2 cells**

Jonathan C. Valdez, Bradley W. Bolling

Dept. of Food Sci. Univ. of Wisconsin-Madison, USA

SY17-6 11:50 **Suppressive effects of luteolin on serotonin production in RBL-2H3 cells**

Naoko Suga[1], Hideyuki Arimitsu[1,2], Akira Murakami[1,2], Yoji Kato[1,2]

[1]Grad. Sch. of Human Sci. & Environ., Univ. of Hyogo, Japan, [2]Res. Inst. Food & Nutr. Sci., Univ. of Hyogo, Japan

Symposium 18 — 10:00-12:00 Room B

Functional Proteins & Peptides-1

Organizers: Kenji Sato (Kyoto Univ., Japan)
Hitomi Kumagai (Nihon Univ., Japan)
Rotimi E. Aluko (Univ. of Manitoba, Canada)

Chairs: Hitomi Kumagai (Nihon Univ., Japan)
Jianping Wu (Univ. of Alberta, Canada)

SY18-1 10:00 **Identification and functional characterization of beef protein-derived bitter taste blocking peptides**

Rotimi E. Aluko[1], Chunlei Zhang[1], Adeola M. Alashi[1], Nisha Singh[2], Kun Liu[2], Prashen Chelikani[2]

[1]Dept. of Food and Human Nutr. Sci., Univ. of Manitoba, Canada, [2]Dept. of Oral Biol., Univ. of Manitoba, Canada

SY18-2 10:25 **Biofunctional properties of *Porphyra dioica* protein hydrolysates/peptides**

Richard J. FitzGerald, Maria Cermeno, Martina O' Keeffe

Dept. of Biol. Sci., Univ. of Limerick, Ireland

SY18-3 10:50 **Multiple physiological effects of dietary β-conglycinin in rats**

Kazunori Koba[1], Koji Kawabeta[1], Michihiro Sugano[2,3]

[1]Dept. of Nutr. Sci., Grad. Sch. of Human Health Sci., Univ. of Nagasaki, Japan, [2]Kyushu Univ., [3]Pref. Univ. Kumamoto, Japan

SY18-4 11:15 **Identification of a novel cholesterol-lowering dipeptide (FP), and its down-regulation of intestinal ABCA1 in hypercholesterolemic rats**

Satoshi Nagaoka

Dept. of Appl. Life Sci., Fac. of Appl. Biol. Sci., Gifu Univ., Japan

SY18-5 11:40 **Absorption of Cblin oligopeptide across Caco-2 cell monolayers and rat intestinal membrane**

Weilin Shen[1], Mitsuru Tanaka[1], Reiko Nakao[2], Takeshi Nikawa[2], Toshiro Matsui[1]
[1]Dept. of Biosci. Biotechnol., Grad. Sch. of Agric., Kyushu Univ., Japan, [2]Dept. of Nutr. Physiol., Inst. of Health Biosci., Tokushima Univ., Japan

Symposium 19 10:00-12:00 Room C

Sponsored by Wakunaga Pharmaceutical Co., Ltd.

Wakunaga Symposium on Garlic Supplement

Chair: Junji Terao (Konan Women's Univ., Japan)

SY19-1 10:00 **Antihypertensive effects of S-1-propenylcysteine, a sulfur compound in aged garlic extract, and its potential mechanism**

Toshiaki Matsutomo
Central Res. Inst., Wakunaga Pharmaceutical Co., Ltd., Japan

SY19-2 10:30 **Aged garlic extract and S-Allyl-L-cysteine cause apoptosis on human tumor cells due to mitochondrial membrane depolarization**

Yuta Kanamori[1], Enzo Agostinelli[1,2]
[1]Dept. of Biochem. Sci. 'A. Rossi Fanelli', Sapienza Univ. of Rome, Italy, [2]Intl. Polyamines Found., Italy

SY19-3 11:00 **Anti-inflammatory effect of S-1-propenylcysteine in aged garlic extract**

Jun-ichiro Suzuki
Central Res. Inst., Wakunaga Pharmaceutical Co. Ltd., Japan

SY19-4 11:30 **A clinical study to evaluate efficacy of oral administration of aged garlic extract on periodontitis**

Avi Zini, Jonathan Mann, Yuval Vered
Fac. of Dental Med., Hebrew Univ. and Hadassah Med. Cent., Israel

Symposium 20 10:00-12:00 Room D

Nutritional Regulation of Epigenetics

Organizers: Shinjiro Hino (Kumamoto Univ., Japan)
Yasutomi Kamei (Kyoto Pref. Univ., Japan)
John Andrew Pospisilik (Van Andel Res. Inst., USA)
Chairs: Shinjiro Hino (Kumamoto Univ., Japan)
Yasutomi Kamei (Kyoto Pref. Univ., Japan)

SY20-1 10:00 **Reduced Dnmt3a increases Gdf5 expression with suppressed satellite cell differentiation and impaired skeletal muscle regeneration**

Yasutomi Kamei
Lab. of Mol. Nutr., Kyoto Pref. Univ., Japan

SY20-2 10:20 **Regulation of glucose and lipid metabolism in next generation by carbohydrate restriction during pregnancy**
Shizuka Hirai
Lab. of Food Nutr., Grad. Sch. of Hort., Chiba Univ., Japan

SY20-3 10:35 **Epigenetic underpinnings of metabolic disease heterogeneity**
J. Andrew Pospisilik
Van Andel Res. Inst., USA

SY20-4 11:15 **Epigenetic regulation of genes related to energy metabolism in perinatal mouse liver and its long-term effects in adulthood**
Xunmei Yuan[1], Koshi Hashimoto[2], Yoshihiro Ogawa[3]
[1]Dept. of Med. Metab., Grad. Sch. of Med. Dent. Sci., Tokyo Med. Dent. Univ., Japan, [2]Dept. of Int. Med., Div. of Diab, Endo. Hem., Dokkyo Med. Univ. Saitama Med. Cent., Japan, [3]Dept. of Med. Bioregul., Grad. Sch. of Med. Sci., Kyushu Univ., Japan

SY20-5 11:35 **Roles of flavin-dependent histone demethylases in metabolic reprogramming**
Shinjiro Hino
Dept. of Med. Cell Biol., Inst. Mol. Embryol. Genet., Kumamoto Univ., Japan

Symposium 21 10:00-12:00 Room E

Natural Plant Pigments

Organizers: Kiyotaka Nakagawa (Tohoku Univ., Japan)
Takanori Tsuda (Chubu Univ., Japan)
Chairs: Kiyotaka Nakagawa (Tohoku Univ., Japan)
Takanori Tsuda (Chubu Univ., Japan)
Barbara Shukitt-Hale (USDA, HNRCA at Tufts Univ., USA)

SY21-1 10:00 **Mechanistic studies on the cellular uptake of curcuminoids and preservation of squalene in foods**
Kiyotaka Nakagawa
Grad. Sch. of Agric. Sci., Tohoku Univ., Japan

SY21-2 10:20 **Curcumin as a functional dietary factor: curcumin induces brown-like adipocyte formation in mice**
Takanori Tsuda, Sho Nishikawa
Coll. of Biosci. and Biotechnol., Chubu Univ., Japan

SY21-3 10:40 **Anthocyanin bioavailability: Aspects and complexities**
Wilhelmina Kalt
Kentville Res. & Dev. Cent., Canada

SY21-4 11:10 **Factors involved in the beneficial effects of polyphenols on neurochemical and behavioral changes in aging**

Barbara Shukitt-Hale, Marshall G. Miller, Derek R. Fisher, Grant A. Rutledge, Donna F. Bielinski, Tammy M. Scott

USDA/ARS Human Nutr. Res. Cent. on Aging at Tufts Univ., USA

SY21-5 11:40 **Anti-inflammatory effect of siphonaxanthin and its underlying molecular mechanisms**

Yuki Manabe[1], Natsuki Hashimoto[1], Toshiro Okazaki[2], Takashi Hirata[1,3], Tatsuya Sugawara[1]

[1]Div. of Appl. Biosci., Grad. Sch. of Agric., Kyoto Univ., Japan, [2]Res. Inst. of Bioresour. Biotech., Ishikawa Pref. Univ., Japan, [3]Shijonawate Gakuen Univ., Japan

11:55 **Closing Remarks**

Symposium 22 — 10:00-12:00 Room F

Molecular Targets of Food Factors

Organizers & Chairs: De-Xing Hou (Kagoshima Univ., Japan)
Ah-Ng Tony Kong (The State Univ. of New Jersey, USA)

10:00 **Overview**

SY22-1 10:05 **Epigenetics and epigenomics studies of food factors: A new frontier**

Ah-Ng Tony Kong

Rutgers-The State Univ. of New Jersey, USA

SY22-2 10:35 **cGMP mediates the beneficial effects of a green tea polyphenol, EGCG**

Motofumi Kumazoe, Yoshinori Fujimura, Hirofumi Tachibana

Div. of Appli. Biol. Chem., Dept. of Biosci. and Biotech., Fac. of Agric., Kyushu Univ., Japan

SY22-3 10:55 **Protein kinases as molecular targets for cancer chemoprevention by dietary flavonoids**

De-Xing Hou[1,2]

[1]Dept. of Food Sci. & Biotech., Fac. of Agric., [2]United Grad. Sch. of Agric Sci., Kagoshima Univ., Japan

SY22-4 11:20 **Analysis of synergistic effects and molecular targets of natural compounds using monoclonal antibodies against natural compounds**

Takuhiro Uto[1,2]

[1]Dept. of Pharmacognosy, Fac. of Pharm. Sci., Nagasaki Intl. Univ., Japan, [2]Grad. Sch. of Pharm. Sci., Nagasaki Intl. Univ., Japan

SY22-5 11:40 **Pyroglutamyl peptides with anti-obesity, which are distributed in Japanese fermented foods, regulate ERK phosphorylation through GPR109A and GPR81**

Saki Shirako[1], Satoshi Miyauchi[1], Vadivel Ganapathy[2], Kenji Sato[1]

[1]Div. of Appl. Biosci., Grad. Sch. of Agric., Kyoto Univ., Japan, [2]Dept. of Cell Biol. & Biochem., Texas Tech Univ., USA

11:55 **Closing Remarks**

Symposium 23 13:30-15:00 Room A

Bioactive Food Compounds for Brain Health & Function

Organizers & Chairs: Yasuhito Shirai (Kobe Univ., Japan)
Con Stough (Swinburne Univ., Australia)

13:30 **Opening Remarks**

SY23-1 13:31 **Understanding and improving cognitive function in the elderly with evidence-based nutraceuticals: data from the Australian Research Council Longevity Intervention (ARCLI)**
Con Stough, Tamara Simpson, Karen Savage, Karen Nolidin
Centre for Human Psychopharmacology, Swinburne Univ., Australia

SY23-2 13:51 **The effects of glycogen on brain function**
Kazuko Kato
Inst. of Health Sci., Ezaki Glico Co., LTD, Japan

SY23-3 14:09 **The mystery of GABA in brain**
Kah-Loon Wong[1], Mujo Kim[1], Yoshinori Katakura[2]
[1]Pharma Foods Intl. Co. Ltd., Japan, [2]Dept. of Biosci.and Biotechnol., Fac. of Agric., Kyushu Univ., Japan

SY23-4 14:27 **Amino acids to help improvement sleep quality**
Katsuya Suzuki
Tech. Dev. Cent., Inst. of Food Sci. and Tech., Ajinomoto Co., Inc., Japan

SY23-5 14:45 **Study on the neuroprotective effect of δ-tocotrienol on methylglyoxal-induced cranial injury in C57BL/6J mice**
Ying-Ling Lin[1], Yun-Xuan Zhang[1], Chung S. Yang[2], Yu-Kuo Chen[1], Hui-Yun Tsai[3]
[1]Dept. of Food Sci., Natl. Pingtung Univ. of Sci. and Technol., Taiwan, [2]Dept. of Chem. Biol., Rutgers Univ., USA, [3]Dept. of Nutr. and Health Sci., Fooyin Univ., Taiwan

Symposium 24 13:30-15:00 Room B

Functional Proteins & Peptides-2

Organizers: Kenji Sato (Kyoto Univ., Japan)
Hitomi Kumagai (Nihon Univ., Japan)
Rotimi E. Aluko (Univ. of Manitoba, Canada)
Chairs: Rotimi E. Aluko (Univ. of Manitoba, Canada)
Hitomi Kumagai (Nihon Univ., Japan)

SY24-1 13:30 **Angiotensin converting enzyme 2 (ACE2) is a novel target of antihypertensive peptide IRW**
Jianping Wu[1,2]
[1]Dept. Agric, Food & Nutr. Sci., [2]Cardiovascular Disease Res. Cent., Univ. of Alberta, Canada

SY24-2 Bioactive peptides from dry meats and its relevance for health
13:55 Fidel Toldrá[1], Marta Gallego[1], M-Concepción Aristoy[1], Milagro Reig[2], Leticia Mora[1]
[1]Inst. Agroquim Tecnol. Alimentos (CSIC), Spain, [2]Inst. Ing. Alimentos Desarrollo, Univ. Politècnica Valencia, Spain

SY24-3 Application of MALDI-MS imaging technique for intestinal absorption process of bioactive peptides
14:20 Toshiro Matsui
Grad. Sch. of Agric., Kyushu Univ., Japan

SY24-4 Cell-based assessment of the bioavailability of brewers' spent grain derived peptides
14:45 Maria Cermeño, Martina O'Keeffe, Richard J. FitzGerald
Dept. of Biol. Sci., Univ. of Limerick, Ireland

Symposium 25 13:30-15:00 Room C

Omics Technologies

Organizers & Chairs: Yoichi Sakakibara (Univ. of Miyazaki, Japan)
Yoshinori Fujimura (Kyushu Univ., Japan)

SY25-1 Challenges in shotgun metaproteomics for microbiome
13:30 Yasushi Ishihama
Dept. of Mol. Cell. Bioanal., Grad. Sch. of Pharm. Sci., Kyoto Univ., Japan

SY25-2 Application of metabolomics for high resolution phenotype analysis
14:00 Eiichiro Fukusaki
Dept. of Biotechnol., Grad. Sch. of Eng., Osaka Univ., Japan

SY25-3 Cancelled

SY25-4 Computation-assisted annotation of biological activity to natural products in botanical supplements
14:30 Jan F. Stevens[1,3], Wenbin Wu[1,3], Cristobal L. Miranda[1,3], Ashish Vaswani[2], Kevin S. Brown[1], Claudia S. Maier[2]
[1]Dept. of Pharmaceutical Sci., Oregon State Univ., USA, [2]Dept. of Chem., Oregon State Univ., USA, [3]Linus Pauling Inst., Oregon State Univ., USA

SY25-5 Targeted proteomics approach to the simultaneous evaluation of multiple functions of food components
14:45 Katsuhisa Kurogi, Akira Ota, Kiyoko Nagahama, Masahito Suiko, Yoichi Sakakibara
Dept. of Biochem. Appl. Biosci., Fac. of Agric., Univ. of Miyazaki, Japan

Symposium 26 13:30-15:00 Room D

Minerals

Organizers & Chairs: Hironori Yamamoto (Jin-ai Univ., Japan)
Taiho Kambe (Kyoto Univ., Japan)

SY26-1 Elaborate control of zinc-responsive ZNT1 expression on the cell surface
13:30 Taiho Kambe
Grad. Sch. of Biostudies., Kyoto Univ., Japan

SY26-2 Dietary phosphorus and human health
13:55 Masae Sakuma
Dept. of Human Nutr., Sch. of Life Sci., Sugiyama Jogakuen Univ., Japan

SY26-3 Effects of iron deficiency on reactive oxygen species and intracellular homeostasis
14:20 Hirofumi Inoue[1], Shi-Ichi Katsumata[2], Rie Katsumata-Tsuboi[1], Miori Tanaka[1], Nobuyuki Takahashi[1], Mariko Uehara[1]
[1]Dept. of Nutr. Sci. and Food Safety, Fac. of Appl. Biosci, Tokyo Univ. of Agric., Japan, [2]Dept. of Nutr. Sci., Fac. of Appl. Biosci, Tokyo Univ. of Agric., Japan

SY26-4 Coated nano ZnO regulates the gene expression of short chain fatty acids receptors and the balance in microbial communities in feces of weaning pigs
14:45 Hongnan Liu[1,3], Miaomiao Bai[1,2],Yulong Yin[1, 2]
[1]Inst. of Subtropical Agric, Chinese Academy of Sci., China, [2]South China Agric Univ., China, [3]Hunan Co-Innovation Cent. of Safety Animal Production, China

Symposium 27 13:30-15:00 Room E

Sponsored by VUTEQ CORPORATION

Biomarkers

Organizers: Yoji Kato (Univ. of Hyogo, Japan)
Noriyuki Miyoshi (Univ. of Shizuoka, Japan)
Sayuri Miyamoto (Universidade de São Paulo, Brazil)
Chairs: Yoji Kato (Univ. of Hyogo, Japan)
Noriyuki Miyoshi (Univ. of Shizuoka, Japan)

SY27-1 Lipid related biomarkers in neurodegenerative diseases: lessons from an ALS model
13:30 Sayuri Miyamoto[1], Adriano B. Chaves-Filho[1], Isabella F.D. Pinto[1], Lucas S. Dantas[1], Alex Inague[1], Rodrigo L. Faria[1], Marisa H.G. Medeiros[1], Isaias Glezer[2], Marcos Y. Yoshinaga[1]
[1]Dept. of Biochem., Instituto de Química, Universidade de São Paulo, Brazil, [2]Dept. of Biochem., Escola Paulista de Medicina, Universidade Federal de São Paulo, Brazil

SY27-2 13:53 **Development of a pre-symptomatic marker and its detection for Point of Care Testing (POCT)**

Kimiko Kazumura
Central Res. Lab., Hamamatsu Photonics K.K., Japan

SY27-3 14:11 **Precise detection of various AGEs and simple detection of AGEs are useful for evaluation of metabolic abnormalities**

Ryoji Nagai[1], Rei-ichi Ohno[1], Hikari Sugawa[1], Ryusuke Suzuki[1,2], Nana Katsuta[1], Shiori Sakake[1], Seitaro Tanaka[1], Yu-ki Tominaga[1], Jun-ichi Shirakawa[1], Mime Nagai[1]
[1]Dept. of Biosci., Grad. Sch. of Agric., Tokai Univ., Japan, [2]Orthopaedic Surgery., Sch. of Med., Jikei Univ., Japan

SY27-4 14:29 **Identification of pro-inflammatory fecal volatile metabolites in high fat diet fed diabetic KK-A^y mice**

Noriyuki Miyoshi
Grad. Sch. of Integrated Pharm. and Nutr. Sci., Univ. of Shizuoka, Japan

SY27-5 14:47 **Altered metabolites related to sarcopenia in the skeletal muscles of aged mice**

Ran Uchitomi[1], Yukino Hatazawa[1], Nanami Senoo[2], Kiyoshi Yoshioka[3], Mariko Fujita[1], Takahiko Shimizu[4], Shinji Miura[2], Yusuke Ono[3], Yasutomi Kamei[1]
[1]Grad. Sch. of Life and Environ. Sci., Kyoto Pref. Univ., Japan, [2]Grad. Sch. of Nutr. and Environ. Sci., Univ. of Shizuoka, Japan, [3]Inst. of Mol. Embryol. and Genet., Kumamoto Univ., Japan, [4]Dept. of Advanced Aging Med., Chiba Univ. Grad. Sch. of Med., Japan

Symposium 28 — 13:30-15:00 Room F

Sponsored by DHC Corporation

Health and Beauty

Chairs: Seika Kamohara (Health Science Univ., Japan)
Kentaro Naito (DHC Corporation, Japan)

SY28-1 13:30 **New strategies for health promotion and the extension of healthy life expectancy by Public-Private Partnerships in Japan**

Seika Kamohara[1,2,3]
[1]Health Sci. Univ., Japan, [2]DHC Co., Japan, [3]Nihon Pharm. Univ., Japan

SY28-2 13:52 **Peptide transporters as a target for cosmetics**

Kentaro Naito
Fundamental Res. Lab., DHC Co., Japan

SY28-3 14:15 **Formulation design to improve dissolution and disintegration of blueberry soft capsule**

Hiromasa Uchiyama[1], Masakatsu Kageyama[2], Riyo Kobashi[2], Rie Ohmori[2], Asuna Senda[2], Kazunori Kadota[1], Yuichi Tozuka[1]
[1]Osaka Univ. of Pharm. Sci., Japan, [2]DHC Co. Laboratories, Div., Japan

SY28-4 **The era of full genome testing: Decoding gene-health and gene-beauty for personalized wellness**
14:37
Iri Sato-Baran
Genesis Healthcare Co., Japan

Symposium 29 15:30-17:30 Room A

Co-organized by Society for Free Radical Research Japan

Antioxidant & Redox Regulation

Organizers: Shinya Toyokuni (Nagoya Univ., Japan)
Ki Baik Hahm (CHA Univ., Korea)
Osamu Handa (Kawasaki Univ., Japan)
Chairs: Shinya Toyokuni (Nagoya Univ., Japan)
Osamu Handa (Kawasaki Univ., Japan)

SY29-1 **Role of ferroptosis in carcinogenesis and tumor biology**
15:30
Shinya Toyokuni
Dept. Pathol. Biol. Responses, Nagoya Univ. Grad. Sch. Med., Japan

SY29-2 **Nutrients as medicine for unmet medical need in gastroenterology**
16:00
Ki Baik Hahm[1,2]
[1]Digestive Dis. Cent. CHA Univ. Sch. of Med., Korea, [2]CHA Cancer Prevention Res. Cent. CHA Bio Complex, Korea

SY29-3 ***Enterococcus faecalis*** **FK-23 may improve the bactericidal activity of human neutrophils via ROS production and phagocytosis**
16:30
Hiroshi Ichikawa, Ryoga Higaki
Grad. Sch. of Life and Med. Sci., Doshisha Univ., Japan

SY29-4 **Exposome-induced oxidative stress on both epididymis and hippocampus in rats**
16:52
Yukiko Minamiyama[1], Keiko Kobayashi[1], Ririko Kawatani[2], Mayuko Osada-Oka[1], Shigekazu Takemura[3], Hiroshi Ichikawa[2]
[1]Grad. Sch. of Life and Environ. Sci., Kyoto Pref. Univ., Japan, [2]Grad. Sch. of Life and Med. Sci. Doshisha Univ., Japan, [3]Dept. of Hepato-Biliary-Pancreatic Surgery, Grad. Sch. of Med., Osaka City Univ., Japan

SY29-5 **Cancelled**

Symposium 30 15:30-17:30 Room B

Functional Proteins & Peptides-3

Organizers: Kenji Sato (Kyoto Univ., Japan)
Hitomi Kumagai (Nihon Univ., Japan)
Rotimi E. Aluko (Univ. of Manitoba, Canada)
Chairs: Richard J. FitzGerald (Univ. of Limerick, Ireland)
Hitomi Kumagai (Nihon Univ., Japan)

SY30-1 15:30 **Bioprocessing for modifying food matrix structure, bioaccessiblity and bioactivity of proteins and peptides**
Chibuike Udenigwe
Sch. of Nutr. Sci., Univ. of Ottawa, Canada

SY30-2 15:55 **Bioactive peptides for preventing cognitive decline and its mechanistic exploration**
Shigeru Katayama, Soichiro Nakamura
Fac. of Agric., Shinshu Univ., Japan

SY30-3 16:20 **Effects of yogurt fermentation on absorption of food-derived collagen peptides in human blood**
Yasutaka Shigemura[1], Yuki Taga[2], Yu Iwasaki[1]
[1]Tokyo Kasei Univ., Japan, [2]Nippi Res. Inst. of Biomatrix, Japan

SY30-4 16:45 **Suppressive effect of cereal albumin on blood glucose elevation**
Yusuke Yamaguchi[1], Kazumi Ninomiya[2], Shigenobu Ina[1], Aya Hamada[1], Fumie Shinmachi[1], Hitoshi Kumagai[2], Hitomi Kumagai[1]
[1]Coll. of Bioresour. Sci., Nihon Univ., Japan, [2]Fac. of Home Economics, Kyoritsu Women's Univ., Japan

SY30-5 17:10 **Novel anti-inflammatory peptides isolated from muscle protein of Thai indigenous chicken**
Phatthawin Lengkidworraphiphat[1,2], Sanchai Jaturasitta[1,3,4], Akika Ejima[5], Sirinya Taya[3], Aroonrat Pharapirom[2], Kenji Sato[5], Rawiwan Wongpoomchai[2,4]
[1]Dept. Anim. Aquat. Sci., Fac. Agric., Chiang Mai Univ., Thailand, [2]Dept. Biochem., Fac. Med., Chiang Mai Univ., Thailand, [3]Sci. Tech. Res. Inst., Chiang Mai Univ., Thailand, [4]Funct. Food Res. Cent. Well-Being, Chiang Mai Univ., Thailand, [5]Div. Appl. Biosci., Grad. Sch. Agric., Kyoto Univ., Thailand

Symposium 31 15:30-17:30 Room C

Co-organized by The Intestinal Microbiology Society/formerly Japan Bifidus Foundation

Allergy & Immune Modulation

Organizers & Chairs: Satoshi Hachimura (Univ. of Tokyo, Japan)
Mamoru Totsuka (Nippon Vet. and Life Sci. Univ., Japan)

15:30 **Introduction: Immune modulation by food**

SY31-1 Regulatory role of gut commensal microbes on gut homeostasis
15:55 Mi-Na Kweon[1,2]
[1]Mucosal Immunol. Lab., Dept. of Convergence Med., Univ. of Ulsan Coll. of Med., Korea, [2]Asan Med. Cent., Korea

SY31-2 Mechanisms of food allergy and its preventive targets
16:25 Seiji Kawamoto
Grad. Sch. Integr. Sci. Life, Hiroshima Univ., Japan

SY31-3 Dietary fiber pectin ameliorates type 1 diabetes in non-obese diabetic mice via caecum-mediated effects
16:55 Chengfei Wu[1,2], Xiaohua Pan[1,2], Jianfang Li[2], Li-Long Pan[3], Jia Sun[1,2]
[1]State Key Lab. of Food Sci. and Technol., Jiangnan Univ., China, [2]Sch. of Food Sci. and Technol., Jiangnan Univ., China, [3]Sch. of Med., Jiangnan Univ., China

SY31-4 Structure-anti-allergic activity relationships of long-chain fatty acids and their derivatives
17:10 In-Hae Kim[1], Yoshiki Kanayama[1], Takuya Sugahara[1,2], Kosuke Nishi[1,2]
[1]Dept. of Biosci., Grad. Sch. of Agric., Ehime Univ., Japan, [2]Food Health Sci. Res. Ctr., Ehime Univ., Japan

17:25 **Closing Remarks**

Symposium 32 15:30-17:30 Room D

Co-organized by The Vitamin Society of Japan

Insufficiency & Deficiency of Vitamins: Approach from Basic, Epidemiologic & Clinical Sciences

Organizers & Chairs: Kiyoshi Tanaka (Kobe Gakuin Univ., Japan)
Naoko Tsugawa (Osaka Shoin Women's Univ., Japan)

SY32-Op Overview
15:30 Naoko Tsugawa[1]
Dept. of Health and Nutr., Osaka Shoin Women's Univ., Japan

SY32-1 The exploration of Vitamin K binding protein using the novel fluorescent probes
15:35 Sho Sano[1], Yuki Ito[1], Maya Kamao[2], Yoshitomo Suhara[1], Yoshihisa Hirota[1]
[1]Syst. Eng. and Sci., Grad. Sch. of Eng. and Sci., Shibaura Inst. of Tech., Japan, [2]Ext. Cent., Kobe Pharm. Univ., Japan

SY32-2 15:45 **Vitamin D deficiency and its associated factors in healthy Malaysian pregnant women**

Siew Siew Lee[1], Su Peng Loh[1], Raman Subramaniam[2], Maiza Tusimin[3], King Hwa Ling[4,5], Kartini Farah Rahim[6]

[1]Dept. of Nutr. & Dietetics, Fac. of Med. & Health Sci., Universiti Putra Malaysia, Malaysia, [2]Fetal Med. & Gynaecology Centre, Malaysia, [3]Dept. of Obstetrics & Gynaecology, Fac. of Med. & Health Sci., Universiti Putra Malaysia, Malaysia, [4]Dept. of Biomedical Sci., Fac. of Med. & Health Sci., Universiti Putra Malaysia, Malaysia, [5]Dept. of Genetics, Harvard Medical Sch., USA, [6]Avisena Specialist Hosp., Malaysia

SY32-3 15:55 **Elucidation of molecular mechanism of vitamin D actions using genetically modified rats in CYP27B1 or vitamin D receptor**

Toshiyuki Sakaki

Dept. of Pharm. Eng., Fac. of Eng., Toyama Pref. Univ., Japan

SY32-4 16:30 **Vitamin D: an essential resource of health – but not compatible with modern civilization?**

Joerg Spitz

Academy for Human Med., German Found. for Health Information and Prevention, Germany

SY32-5 17:05 **Insufficiency of B vitamins with its possible clinical implications**

Kiyoshi Tanaka[1], Misora Ao[2]

[1]Fac. of Nutr., Kobe Gakuin Univ., Japan, [2]Dept. of Food and Nutr., Kyoto Women's Univ., Japan

Symposium 33 15:30-17:30 Room E

Autophagy & Programmed Cell Death

Organizers & Chairs: Shivendra V. Singh (Univ. of Pittsburgh, USA)
Taichi Hara (Waseda Univ., Japan)

SY33-1 15:30 **Autophagy & programmed cell death in cancer chemoprevention by dietary isothiocyanates**

Shivendra V. Singh

Dept. of Pharmacol. & Chem. Biol., Univ. of Pittsburgh, USA

SY33-2 15:55 **Delta-tocopherol induced endoplasmic reticulum (ER) stress causes ER phagy and apoptosis in bladder cancer models**

Christopher A. Blair[1], Hanze Hu[1], Tim Huynh[1], Maggie Wu[1], Chung S. Yang[2], Xiaolin Zi[1,3]

[1]Dept. of Pharm. Sci., Univ. of California, USA, [2]Dept. of Chem. Biol., Rutgers, The State Univ. of New Jersey, USA, [3]Dept. of Urol., Univ. of California, USA

SY33-3 16:15 **Terpenes induce structure dependent autophagy and apoptosis in human colon cancer cells**

Kozue Sakao[1,2], Kikuko Noridomi[2], De-Xing Hou[1,2]

[1]Course of Biol. Sci. and Tech., The United Grad. Sch. of Agric. Sci., Kagoshima Univ., Japan, [2]Dept. of Biochemi. Sci. and Tech., Kagoshima Univ., Japan

SY33-4 Physiological roles of autophagy under Zn deficiency in plants
16:30 Kohki Yoshimoto
Meiji Univ., Japan

SY33-5 Application of autophagy to the health promotion
16:55 Taichi Hara
Fac. of Human Sci. Waseda Univ., Japan

SY33-6 Exploration of bioactive food factors for the control of autophagy flux
17:15 Kohta Ohnishi[1], Moe Fujimoto[2], Maiko Sakai[3], Teppei Fukuda[3], Aika Ohnishi[3], Hirokazu Ohminami[1], Masashi Masuda[1], Hisami Yamanaka-Okumura[1], Yoshichika Kawai[1], Yutaka Taketani[1]
[1]Inst. of Biomed. Sci., Tokushima Univ., Japan, [2]Sch. of Med. Nutr., Tokushima Univ., Japan, [3]Grad. Sch. of Nutr. and Biosci., Tokushima Univ., Japan

Symposium 34 15:30-17:30 Room F

Sponsored by Lion Corporation

Lactoferrin Symposium by Lion Corporation

Organizers: Noriyuki Monoi (Lion Co., Japan)
Susumu Hiratsuka (Lion Co., Japan)
Chairs: Michiaki Murakoshi (Lion Co., Japan)
Megumi Aono (Lion Co., Japan)

15:30 **Opening Remarks**
Megumi Aono
Wellness Res. Laboratories., Lion Co., Japan

15:35 **Overview**
Michiaki Murakoshi
Res. and Development Headquarter., Lion Co., Japan

SY34-1 Reducing effect of enteric-coated lactoferrin on visceral fat accumulation in
15:40 **Japanese men and women with abdominal obesity and its possible mechanisms**
Tomoji Ono
Wellness Res. Laboratories., Lion Co., Japan

SY34-2 Role of milk lactoferrin in improving neurodevelopment and cognition:
16:10 **Biochemical studies to elucidate molecular mechanisms**
Bing Wang
Graham Centre for Agricultural Innovation, Charles Sturt Univ., Australia

SY34-3 The potentiating action of lactoferrin on the photic entrainment of the
16:50 **mammalian circadian clock**
Takahiro Moriya[1,2], Miho Sawauchi[1], Takuya Kyoda[1], Hidefumi Kuwata[3], Etsumori Harada[4]
[1]Dept. Cell. Sig., Grad. Sch. Pharm. Sci., Tohoku Univ., Japan, [2]Dept. Anat. & Physiol. Sch. Pharm. Sci., Ohu Univ., Japan, [3]NRL Pharma, Inc., Japan, [4]Dept. Veter. Med., Tottori Univ., Japan

December 4

Plenary Lectures 5 & 6 — 8:30-9:30 Room A

Chair: Taiichiro Seki (Nihon Univ., Japan)

PL5 **Innovation of food science by the integration of multiple omics technologies**
8:30 Hisanori Kato
Grad. Sch. of Agric. and Life Sci., Univ. of Tokyo, Japan

Chair: Yuji Naito (Kyoto Pref. Univ. of Med., Japan)

PL6 **Flavonoids and inflammation: local and systemic effects**
9:00 Cesar G. Fraga[1,2,3], Patricia I. Oteiza[3,4]
[1]Fisicoquímica, Fac. Farmacia y Bioquímica, Universidad de Buenos Aires, Argentina, [2]IBIMOL-Universidad de Buenos Aires-CONICET, Argentina, [3]Dept. of Nutr., Univ. of California, USA, [4]Dept. Environ. Toxicol., Univ. of California, USA

Symposium 35 — 10:00-12:00 Room A

The Importance of Lipid Quality (Lipoquality) in Health and Disease

Organizers & Chairs: Makoto Arita (Keio Univ. / RIKEN, Japan)
Jun Ogawa (Kyoto Univ., Japan)

SY35-1 **Omega-3 fatty acid metabolism that confers anti-inflammation and tissue homeostasis**
10:00 Makoto Arita[1,2,3]
[1]Div. of Physiol. Chem. and Metab., Grad. Sch. of Pharm. Sci., Keio Univ., Japan, [2]Lab. for Metabolomics, RIKEN-IMS, Japan, [3]Grad. Sch. of Med. Life Sci., Yokohama-City Univ., Japan

SY35-2 **Metabolism of dietary omega-6 fatty acids by gut microbiota and host energy regulation**
10:25 Ikuo Kimura
Dept. of Appl. Biol. Sci, Grad. Sch. of Agri., Tokyo Univ. of Agri. and Tech., Japan

SY35-3 **Health promotion by gut microbial dietary fatty acid metabolism**
10:50 Jun Ogawa[1], Michiki Takeuchi[2], Akinori Ando[1], Ryotaro Hara[2], Shigenobu Kishino[1]
[1]Div. Appl. Life Sci., Grad. Sch. of Agric., Kyoto Univ., Japan, [2]Lab. Ind. Microbiol., Grad. Sch. of Agric., Kyoto Univ., Japan

SY35-4 **RNA-seq analysis of the regulatory mechanism of the lipid metabolism pathways in ileum of broilers supplemented with quercetin**
11:15 Yao Li, Mi Wang, Linlin Ying, Fenglin Xiao, Yanjun Mao, Bo Wang, Shanshan Wang
Dept. of Anim. Nutr. and Feed Sci., Coll. of Ani. Sci. and Tech., NE Agri. Univ., China

SY35-5 EPA/DHA dietary supplement compliance: Content claims and quality
11:30 Gerard Bannenberg
GOED (Global Organization for EPA and DHA Omega-3s), USA

Symposium 36 10:00-12:00 Room B

Phenolics & Antioxidants

Organizers: Rong Tsao (Agric. and Agri-Food Canada, Canada)
Kenji Sato (Kyoto Univ., Japan)
Chairs: Rong Tsao (Agric. and Agri-Food Canada, Canada)
Ronald Pegg (Univ. of Georgia, USA)

SY36-1 Chemical profiling and evaluation of antidiabetic activities of *Lepisanthes fruticosa* (Roxb) Leenh fruit extracts
10:00 Amin Ismail[1], AHS Mirfat[1,2], K. Nur Kartinee[3], H. Muhajir[4], M.A. Mohd-Shukri[2]
[1]Dept. of Nutr. and Diet., Fac. of Med. and Health Sci., Univ. Putra Malaysia (UPM), Malaysia, [2]Malaysian Agric. Res. and Dev. Inst., Persiaran MARDI-UPM, Malaysia, [3]Dept. of Chem., Fac. of Sci., UPM, Malaysia, [4]Dept. of Microbiol., Fac. of Biotechnol. and Biomol. Sci., UPM, Malaysia

SY36-2 Dietary polyphenols: their antioxidant, anti-inflammatory and prebiotic effects
10:20 Rong Tsao
Guelph Res. & Dev. Centre, Agric. and Agri-Food Canada, Canada

SY36-3 Transport of Georgia pecan phenolics across a Caco-2 monolayer
10:40 Ronald Pegg[1], Michelle Cheung[1], Phillip Greenspan[2]
[1]Dept. of Food Sci. & Tech., Univ. of Georgia, USA, [2]Dept. Pharm. & Biomed. Sci., Univ. of Georgia, USA

SY36-4 Berry pomace - cheap and excellent source of valuable functional ingredients for foods and nutraceuticals
11:00 Petras R. Venskutonis
Dept. of Food Sci. and Technol., Kaunas Univ. of Technol., Lithuania

SY36-5 Profile of phenolic bioactives of whole young garlic
11:20 Joanna Skoczylas[1], Kinga Dziadek[1], Anneta Kopeć[1], Elżbieta Jędrszczyk[2], Jerzy Zawistowski[3]
[1]Dept. of Human Nutr., Fac. of Food Technol., Univ. of Agric. in Kraków, Poland, [2]Dept. of Vegetable and Medicinal Plants, Fac. of Biotechnol. and Horticulture, Univ. of Agric. in Kraków, Poland, [3]Univ. of British Columbia, Fac. of Land and Food Systems, Food, Nutr. and Health, Vancouver, British Columbia, Canada

SY36-6 Enzymatic synthesis and stabilization of lipid ingredients
11:40 Colin J. Barrow, Taiwo Akanbi, Tim Nalder
Sch. of Life and Envinron. Sci., Deakin Univ., Australia

Symposium 37 10:00-12:00 Room C

Exosome & microRNA

Organizers & Chairs: Kei Sonoyama (Hokkaido Univ., Japan)
Janos Zempleni (Univ. of Nebraska-Lincoln, USA)

10:00 **Overview**

SY37-1 10:05 **Bioavailability, distribution and biological function of milk exosomes and their RNA cargos**
Janos Zempleni
Dept. of Nutr. and Health Sci., Univ. of Nebraska-Lincoln, USA

SY37-2 10:35 **The possible role of milk-derived microRNAs**
Hirohisa Izumi
Morinaga Milk Ind. Co., Ltd., Japan

SY37-3 10:55 **Possible connection between diet, health, and microRNA**
Kurataka Otsuka[1,2]
[1]Div. of Mol. Cell. Med., Natl. Cancer Cent. Res. Inst., Japan, [2]R&D Div., Kewpie Co., Japan

SY37-4 11:15 **Exosome, a possible mediator of crosstalk between gut microbiota and host**
Kei Sonoyama
Div. of Fund. Agrisci., Res. Fac. of Agric., Hokkaido Univ., Japan

SY37-5 11:35 **A novel antiobesity effect of garlic compound mediated through miRNA**
Takahiro Watanabe[1], Ayana Ikeda[1], Kiki Seo[1], Atsushi Miura[1], Yori Ozaki-Masuzawa[2], Takashi Hosono[1,2], Taiichiro Seki[1,2]
[1]Dept. of Appl. Life Sci., Grad. Sch. of Bioresour. Sci., Nihon Univ., Japan, [2]Dept. of Chem. and Life Sci., Coll. of Bioresour. Sci., Nihon Univ., Japan

11:50 **Closing Remarks**

Symposium 38 10:00-12:00 Room D

Functional Carbohydrates

Organizers & Chairs: Tomio Yabe (Gifu Univ., Japan)
Masashi Mizuno (Kobe Univ., Japan)
Ross D. Vasquez (Univ. Santo Tomas, Phillipines)

SY38-1 10:00 **Inhibitory effect of sulfated polysaccharide from *Codium edule* P.C. Silva on 2,4-Dinitrofluorobenzene (DNFB)-induced allergic contact dermatitis on mice**
Ross D. Vasquez[1,2,3], Martin Raemond B. Mallabo[1], Mary Jho-Anne Corpuz[1,2,3]
[1]The Grad. Sch., Univ. of Santo Tomas, Philippines, [2]Dept. of Pharm., Fac. of Pharm., Univ. of Sto. Tomas, Philippines, [3]Res. Cent. for the Natrl. and App. Sci., Univ. of Sto. Tomas, Philippines

SY38-2 10:20 **Dietary fiber pectin mitigates experimental colitis in a side chain-dependent manner**

Kohji Kitaguchi[1,2,3], Keita Ishisono[2], Tosiyuki Mano[3], Tomio Yabe[1,2,3,4]
[1]Dept. of Appl. Life Sci., Fac. of Appl. Biol. Sci., Gifu Univ., Japan, [2]United Grad. Sch. of Agric. Sci., Gifu Univ., Japan, [3]Grad. Sch. of Nat. Sci. Technol., Gifu Univ., Japan, [4]G-CHAIN, Japan

SY38-3 10:40 **The immunomodulating β-glucan can influence monocyte-macrophage differentiation in innate immunity and prevent inflammatory disease**

Ken-ichiro Minato[1], Lisa C. Laan[2], Irma van Die[2]
[1]Dept. of Appl. Biol. Chem., Meijo Univ., Japan, [2]Dept. of Mol. Cell Biol. Immunol., VU Univ. Med. Cent., the Netherlands

SY38-4 11:00 **Application of β-glucan-binding proteins for measuring the β-glucan content of food materials**

Yoshiyuki Adachi, Kengo Kasahara, Yuka Hanayama, Takashi Kanno, Junko Tetsui, Daisuke Yamanaka, Ken-ichi Ishibashi, Naohito Ohno
Lab. Immunopharm. Microbial Products, Sch. of Pharm.,Tokyo Univ. Pharm. & Life Sci., Japan

SY38-5 11:20 **An establishment of NMR-based analytical assay for sulfated saccharides in solution**

Juneha Bak, Yoshiyuki Miyazaki, Toshirou Matsui
Dept. of Biosci. Biotechnol., Grad. Sch. of Agric., Kyushu Univ., Japan

SY38-6 11:40 **Lean male and female mice respond differently to increasing dietary intake of high amylose wheat**

See Meng Lim[1,3,4], Amanda Page[2,3], Hui Li[2,3], John Carragher[1], Iain Searle[1], Sarah Robertson[2], Beverly Muhlhausler[1,3,5]
[1]Fac. of Sci., The Univ. of Adelaide, Australia, [2]Fac. of Health and Med. Sci., The Univ. of Adelaide, Australia, [3]South Australian Health and Med. Res. Inst., Australia, [4]Cent. for Community Health, Fac. of Health Sci., Universiti Kebangsaan Malaysia, Malaysia, [5]Commonwealth Sci. and Ind. Res. Organisation, Australia

Symposium 39 — 10:00-12:00 Room E

Emerging Roles of Hormesis in Health & Diseases

Organizers & Chairs: Akira Murakami (Univ. of Hyogo, Japan)
Suresh I. S. Rattan (Aarhus Univ., Denmark)

10:00 **Overview**

SY39-1 10:03 **Hormesis-mediated mechanisms of action underlying bioactivities of phytochemicals**

Akira Murakami
Dept. of Food Sci. & Nutr., Sch. of Human Sci. & Environ., Univ. of Hyogo, Japan

SY39-2 10:41 **Inter-tissue communication that intergenerationally regulates oxidative stress in *C. elegans***

Masaharu Uno[1,2], Saya Kishimoto[1,2], Emiko Okabe[1,2], Masanori Nono[1,2], Eisuke Nishida[1,2]
[1]RIKEN Cent. for Biosystems Dynamics Res. (BDR), Japan, [2]Dept. of Cell. and Dev. Biol., Grad. Sch. of Biostudies, Kyoto Univ., Japan

SY39-3 11:19 **Hormesis and nutritional hormetins for healthy ageing and longevity**

Suresh I. S. Rattan
Dept. Mol. Biol. and Genet., Aarhus Univ., Denmark

11:57 **Closing Remarks**

Symposium 40 10:00-12:00 Room F

Co-organized by Japan Society of Nutrition and Food Science

Food Science in the Big Data Era

Organizers: Hisanori Kato (Univ. of Tokyo, Japan)
Shoko Takahashi (Genequest Inc, Japan)

SY40-1 10:00 **Relationship between early life body weight and adult diabetes: results from cohort consortium mega data**

Tao Huang[1,2,3]
[1]Key Lab. of Mol. Cardiovascular Sci., Peking Univ., Ministry of Education, China, [2]Dept. of Global Health, Sch. of Public Health, Peking Univ., China, [3]Dept. of Epidemiol. and Biostat., Sch. of Public Health, Peking Univ. Health Sci. Cent., China

SY40-2 10:30 **Nutrigenomics research trough personal genome service Genequest**

Shoko Takahashi
Genequest Inc., Japan

SY40-3 11:00 **Use of big data in food science: Exploring responder status of the gut microbiome for calcium absorption**

Corrie M. Whisner[1], Owen Ma[2], Arindam Dutta[2], Daniel W. Bliss[2], Cindy H. Nakatsu[3], Connie M. Weaver[4]
[1]Coll. of Health Solutions, Arizona State Univ., USA, [2]Sch. of Electrical, Computer and Energy Eng., Arizona State Univ., USA, [3]Dept. of Agronomy, Purdue Univ., USA, [4]Dept. of Nutr Sci., Purdue Univ., USA

SY40-4 11:30 **Bridging epigenomics and transcriptomics data for the understanding of long term effects of nutrition**

Hisanori Kato
Grad. Sch. of Agric. and Life Sci., Univ. of Tokyo, Japan

Flash Talk Session 1 10:00-11:30 Room G

Flash Talk Presentations by Poster Presenters, Selected by ISNFF2019 Local President

Chair: Lijing Ke (Zhejiang Gongshang Univ., China)

FT1-01 (PB0607) Albumin extracted from rice bran is resistant to digestion and adsorbs glucose

10:00 Chiaki Sugimoto[1], Aya Hamada[1], Shigenobu Ina[1], Yusuke Yamaguchi[1], Hitoshi Kumagai[2], Hitomi Kumagai[1]

[1]Coll. of Bioresour. Sci., Nihon Univ., Japan, [2]Fac. of Home Economics, Kyoritsu Women's Univ., Japan

FT1-02 (PB0611) Flaxseed proteome as precursors of antioxidant peptides: An *in silico* study

Dawei Ji[1], Chibuike Udenigwe[2,3], Dominic Agyei[1]

10:05 *[1]Dept. of Food Sci., Univ. of Otago, New Zealand, [2]Sch. of Nutr. Sci., Univ. of Ottawa, Canada, [3]Dept. of Chem. and Biomol. Sci., Univ. of Ottawa, Canada*

FT1-03 (PB0727) Solvent extraction and discrimination of Kyoho skin, seed, and flesh antioxidant activities: An unsupervised case study using advanced chemometrics

10:10 Kandi Sridhar, Albert Linton Charles

Dept. of Tropical Agric. and Intl. Cooperation, Natl. Pingtung Univ. of Sci. and Technol., Taiwan

FT1-04 (PC1808) The p75NTR-positive fibroblasts from mouse skin respond to Pro-Hyp, collagen-derived peptide

10:15 Tomoko Asai[1], Kazunobu Yoshikawa[2], Kazuhiro Sawada[2], Xin Wei[2], Kenji Sato[2]

[1]Dept. of Food Sci. and Nutr., Fac. of Human Life and Environ. Sci., Nara Women's Univ., Japan, [2]Div. of Appl. Biosci., Grad. Sch. of Agric., Kyoto Univ., Japan

FT1-05 (PC0711) Glutelin and its hydrolysate of color rice bran attenuated formation of preneoplastic lesions in liver and colon of carcinogens initiated rats

10:20 Aroonrat Pharapirom[1], Akkasit Jongjareonrak[2], Phatthawin Lengkidworraphiphat[1,3], Kenji Sato[4], Rawiwan Wongpoomchai[1,5]

[1]Dept. of Biochem., Fac. of Med., Chiang Mai Univ., Thailand, [2]Dept. of Food Eng., Fac. of Agro-ind., Chiang Mai Univ., Thailand, [3]Dept of Anim. and Aquat. Sci., Fac. of Agric., Chiang Mai Univ., Thailand, [4]Div. of Appl. Biosci., Grad. Sch. of Agric., Kyoto Univ., Japan, [5]Func. Food Res. Cen. Well-Being, Chiang Mai Univ., Thailand

FT1-06 (PC0703) Effects of carnosine on colon carcinogenesis in mice

Jia-Huei Li[1], Hsin-Ying Kuo[1], Ya-Ting Chen[2], Chih-Chung Wu[3], Shu-Ling Hsieh[1]

10:25 *[1]Dept. of Seafood Sci., Natl. Kaohsiung Univ. of Sci. and Technol., Taiwan, [2]Coll. of Hydrosphere Sci., Natl. Kaohsiung Univ. of Sci. and Technol., Taiwan, [3]Dept. of Food and Nutr., Providence Univ., Taiwan*

FT1-07 (PB0620) Study on the structure of oligopeptides with the function of improving athletic ability in industrial-scale produced corn gluten meal hydrolysate

10:30 Liang Chen

China Natl. Res. Inst. of Food and Fermentation Ind., China

FT1-08 (PB0619) Study on the structure of oligopeptides with beauty effect in industrial-scale produced rice protein hydrolysate

10:35 Yuqing Wang

China Natl. Res. Inst. of Food and Fermentation Ind., China

FT1-09 (PD0112) Detection of cysteine peptides *in vitro* and *in vivo* digests of bovine lactoferrin

10:40 Koji Kanazawa[1], Akika Ejima[2], Megumi Nakamura[1], Yasushi A. Suzuki[1], Kenji Sato[2]

[1]Biochem. Lab., Saraya Co. Ltd., Japan, [2]Div. of Appl. Biosci., Grad. Sch. of Agric., Kyoto Univ., Japan

FT1-10 (PA0802) Effect of glycosylation on the functional properties and conformational characteristics of oat proteins

10:45 Hailing Wang[1,2], Benyang Wu[1,2], Yuande Shi[1], Pingping Su[1], Sheng Chen[1], Shaoyun Wang[3], Leiwen Xiang

[1]Fuqing Branch, Fujian Normal Univ., China, [2]Coll. of Life Sci., Fujian Normal Univ., China, [3]Coll. of Biosci. and Biotechnol., Fuzhou Univ., China

FT1-11 (PA0711) Bioactive incidental food nanoparticles in black tea infusion exhibiting elevated antioxidant activity

10:50 Lijing Ke, Huan Han, Guanzhen Gao, Jianwu Zhou, Pingfan Rao

Food Nutr. Sci. Centre, Sch. of Food Sci. and Biotech., Zhejiang Gongshang Univ., China

FT1-12 (PB0608) Effect of HCl-treated wheat protein on antigen-presenting cells

Hayato Kobayashi, Ryosuke Abe, Narumi Matsukaze, Yusuke Yamaguchi, Hitomi Kumagai

10:55

Coll. of Bioresour. Sci., Nihon Univ., Japan

FT1-13 (PA0108) Influence on Cheddar cheese proteolysis and sensory characteristics of non-starter strain *Lactobacillus plantarum*

11:00 Weiwei Bi[1,2,4], Guixing Zhao[2,3,4], Guangjin Wang[2], Bixian Zhang[1,2], Shuwen Lu[5], Haofei Liu[2], Jinrong Li[2], ,Lei Chen[2]

[1]Heilongjiang Academy of Agric. Sci. Post-Doctoral Station, China, [2]Soybean Res. Inst., Heilongjiang Academy of Agric. Sci., China, [3]Coll. of Food Sci. and Eng., Harbin Univ. of Commerce, China, [4]Grain and Corn Eng. Technol. Res. Cent., China State Administration of Grain, China, [5]Inst. of Food Res., Heilongjiang Academy of Agric. Sci., China

FT1-14 (PC1208) Gut microbiota modulation by vitamin A fortification in Muslim lactating women and infants

11:05 Lukman Azis[1], Siwaporn Pinkaew[1], Santad Wichienchot[2]

[1]Dept. of Food Sci. and Nutr., Fact. of Sci. and Tech., Prince of Songkla Univ., Thailand, [2]IGS-Nutraceutical and Functional Food, Prince of Songkla Univ., Thailand

FT1-15 (PC1213) Intra-rectal ethanol administration for colitis predisposition in a mouse model

11:10 Fang-Yi Chu

Dept. of Nutr., Chung Shan Med. Univ., Taiwan

Symposium 41 13:30-15:00 Room A

Chronobiology and Nutrition/Foods

Organizer: Hiroyuki Sakakibara (Univ. of Miyazaki, Japan)
Chairs: Hiroyuki Sakakibara (Univ. of Miyazaki, Japan)
Yoko Yamashita (Kobe Univ., Japan)

13:30 **Overview**

SY41-1 Interaction between food factors and circadian clocks
13:35 Hideaki Oike
Food Res. Inst., NARO, Japan

SY41-2 Chrononutritional modulation of the circadian clock by amino acids
14:05 Shinobu Yasuo
Fac. of Agric., Kyushu Univ., Japan

SY41-3 Cacao polyphenol promotes energy metabolism under the circadian clock gene expressions
14:35 Yoko Yamashita, Ken-yu Hironao, Hitoshi Ashida
Dept. of Agrobiosci., Grad. Sch. of Agric. Sci., Kobe Univ., Japan

SY41-4 Quantitative analysis of melatonin, serotonin and tryptophan content in fruits
14:50 Thorung Pranil[1,2], Patiwit Loypimai[3], Anuchita Moongngarm[1,2]
[1]Dept. of Food Tech. and Nutr., Fac. of Tech., Mahasarakham Univ., Thailand, [2]Res. Unit of Nutr. for Health, Fac. of Tech., Mahasarakham Univ., Thailand, [3]Div. of Food Sci. and Tech., Fac. of Sci. and Tech., Bansomdejchapraya Rajabhat Univ., Thailand

Symposium 42 13:30-15:00 Room B

Global Fermented Foods –From Ethnography & Microbes to Metagenomics–

Organizers: Dong-Hwa Shin (Chonbuk Natl. Univ., Korea)
Kenji Sato (Kyoto Univ., Japan)
Chairs: Dong-Hwa Shin (Chonbuk Natl. Univ., Korea)
Kalidas Shetty (North Dakota state Univ., USA)

13:30 **Overview**

SY42-1 Metabolic strategies to advance indigenous and ethnic fermented foods for solutions to global public health challenges
13:35 Kalidas Shetty
North Dakota State Univ., USA

SY42-2 Typical traditional fermented foods in Korea and their functionaries
13:55 Dong-Hwa Shin
Dept. of Fd Sci. and Tech. Chonbuk Natl Univ., Korea

SY42-3 14:15 **Miang, a traditional fermented tea from north Thailand and health benefit potentiality**

Chartchai Khanongnuch[1,3], Chalermpong Saenjum Saenjum[2,3], Kalidas Shetty[4]
[1]Div. of Biotechnol., Sch. Agro-Industry, Fac. of Agro-Industry., Chiang Mai Univ., Thailand, [2]Dept of Pharm. Sci., Fac. of Pharm. Chiang Mai Univ., Thailand, [3]Res. Cent. for Multidis. Approaches to Miang, Chiang Mai Univ., Thailand, [4]Glob. Inst. of Food Security and Int. Agri., Dept. of Plant Sci., North Dakota State Univ., USA

SY42-4 14:35 **Re-evaluation of fermented foods : From birth of fermentation foods and to rebirth for new era**

Dae Young Kwon
Korea Food Res. Inst., Korea

14:55 **Discussion & Closing Remarks**

Symposium 43 13:30-15:00 Room C

Taste & Olfaction

Organizer: Takumi Misaka (Univ. of Tokyo, Japan)
Chairs: Mee-Ra Rhyu (Korea Food Res. Inst., Korea)
Takumi Misaka (Univ. of Tokyo, Japan)

13:30 **Overview**

SY43-1 13:35 **Umami-bitter interactions on human bitter taste receptor: evidence for direct binding of umami stimuli to T2R16**

Mee-Ra Rhyu
Div. of Food Functionality, Korea Food Res. Inst., Korea

SY43-2 14:05 **Sake and its aroma**

Atsuko Isogai
Natl. Res. Inst. of Brewing, Japan

SY43-3 14:25 **Molecular mechanisms of ligand recognition in the umami taste receptor, T1R1/T1R3**

Yasuka Toda[1], Yoshiro Ishimaru[1], Takumi Misaka[2]
[1]Dept. of Agric. Chem., Meiji Univ., Japan, [2]Dept. Appl. Biol. Chem., Univ. of Tokyo, Japan

SY43-4 14:45 **Effect of tamping force on aroma components in specialty espresso coffee**

Kazuya Iwai, Shota Matsuyama, Misako Kakiuchi, Shingo Ariki, Taiji Fukunaga
Innovation Cent., UCC Ueshima Coffee Co. Ltd., Japan

Symposium 44 13:30-15:00 Room D

Protein Modification & Targeting

Organizers: Claus Schneider (Vanderbilt Univ. Med. Sch., USA)
Mitsugu Akagawa (Osaka Pref. Univ., Japan)
Chairs: Claus Schneider (Vanderbilt Univ. Med. Sch., USA)
Sayuri Miyamoto (Universidade de São Paulo, Brazil)

SY44-1 Mechanistic basis of protein binding by curcumin and other polyphenolic compounds
13:30
Paula B. Luis, Fumie Nakashima, William E. Boeglin, Claus Schneider
Dept. of Pharmacol., Vanderbilt Univ. Med. Sch., USA

SY44-2 Irreversible inhibition of monoamine oxidases by serotonin-derived quinones
13:55
Yoji Kato[1,2], Sae Fujishima[1], Naoko Suga[1], Aoi Sugimoto[1], Makoto Naoi[3], Wakako Maruyama[3]
[1]Sch. of Human Sci. & Environ., Univ. of Hyogo, Japan, [2]Res. Inst. for Food & Nutr. Sci., Univ. of Hyogo, Japan, [3]Dep. Health Nutr., Fac. Psychol. & Phys. Sci., Aichi Gakuin Univ., Japan

SY44-3 Identification of the target proteins of food factors with FG beads
14:20
Yosuke Iizumi, Tomoyuki Taniguchi, Wakana Goi
Dept. of Mol.-Target. Cancer Prev., Grad. Sch. of Med. Sci., Kyoto Pref. Univ. of Med., Japan

SY44-4 Biological effects of oxyphytosterol generated by ozone
14:45
Bianca S. Takayasu[1], Anali D.M.B Garnique[2], Gláucia M. Machado-Santelli[2], Miriam Uemi[3], Janice Onuki[1]
[1]Lab. of Molecular Biol., Butantan Inst., Brazil, [2]Dept. of Cell Biol. and Dev., Inst. of Biomed. Sci., Univ. of São Paulo, Brazil, [3]Dept. of Chem., Inst. of Environ. Sci. Chem. and Pharm., Federal Univ. of São Paulo, Brazil

Symposium 45 13:30-15:00 Room E

Sponsored by Nitta Gelatin Inc.

Collagen peptide symposium –Mechanism and Effects on Arteriosclerosis and Diabetes mellitus–

Chair: Hidekazu Yamada (Kindai Univ. Nara Hosp., Japan)

SY45-1 Food-derived and endogenous collagen peptide, Pro-Hyp –Function and target cell–
13:30
Kenji Sato
Div. of Appl. Biosci., Grad. Sch. of Agric., Kyoto Univ., Japan

SY45-2 14:00 **A double-blind, placebo-controlled, randomized clinical study of the effect of porcine collagen peptide supplementation on atherosclerosis in healthy older individuals**

Michiya Igase[1], Yoko Okada[2], Masayuki Ochi[2], Keiji Igase[3], Naoki Inoue[4], Seiko Koizumi[4], Yasumasa Ohyagi[2]

[1]Dept. of Anti-aging Med., Ehime Univ. Grad. Sch. of Med., Japan, [2]Dept. of Geriatric Med. and Neurol., Ehime Univ. Grad. Sch. of Med., Japan, [3]Dept. of Advanced Neurosurgery, Ehime Univ. Grad. Sch. of Med., Japan, [4]Res. and Dev. Cent., Nitta Gelatin Incorporated, Japan

SY45-3 14:30 **Clinical study on two doses of collagen peptide as nutraceutical therapy in the management of diabetes mellitus (type II)**

Sriraam Subbiah[1], Suresh Kumar[2], Shajil Madhavah[2]

[1]Aurous HealthCare R&D India Pvt. Ltd, India, [2]Nitta Gelatin India Limited, India

Symposium 46 — 13:30-15:00 Room F

Bone Health and Lifestyle

Organizers & Chairs: Yuko Tousen (Natl. Inst. of Biomed. Health and Nutr., Japan)
Marlena C. Kruger (Massey Univ., New Zealand)

13:30 **Overview**

SY46-1 13:35 **Vitamin E in bone metabolism**

Toru Fukuda

Dept. of Food Sci., Tokyo Seiei Coll., Japan

SY46-2 13:55 **Combined effects of soy isoflavone and indigestible food components on equol production and bone mineral density**

Yuko Tousen

Dept.of Food Function and Labeling, Natl. Inst. of Biomed., Health and Nutr., Japan

SY46-3 14:15 **Bone, bone markers, and the response to dairy and other foods in older women**

Marlena C. Kruger

Sch. of Health Sci., Coll. of Health, Massey Univ., New Zealand

14:50 **Closing Remarks**

Flash Talk Session 2 — 13:30-15:00 Room G

Flash Talk Presentations by Poster Presenters, Selected by ISNFF2019 Local President

Chair: Charles (Chun) Hu (Amway Co., USA)

FT2-01 (PA0311) Optimization of solar and mechanical drying methods to obtain the optimum flavor and bio-activities in ginger (*Zingiber officinale L*) powders

13:30 Christofora Hanny Wijaya[1,2], G. Permata Heru[2], Lucia C. Soedirga[2], E. Bimo Aksono[3], Eko H. Purnomo[1], Triyati D . Kencana W[4], R.R. Fosa Sarassina[5]
[1]Fac. of Agric, and Eng. Technol., Bogor Agric. Univ.(IPB Univ.), Indonesia, [2]Fac. of Sci. and Technol., Univeristas Pelita Harapan, Indonesia, [3]Fac. of Veterinary Med., Surabaya, Airlangga, Indonesia, [4]Fac. of Math. and Nat. Sci., Institut Teknologi Bandung, Indonesia, [5]Sch. of Vocation, Universitas Gajah mada, Indonesia

FT2-02 (PD0718) The challenge and opportunity of using botanical ingredients in plant-based dietary supplements and functional foods

13:35 Charles (Chun) Hu
Nutrilite Health Inst., USA

FT2-03 (PD0708) Evaluation of functional and sensory properties of Indonesian fermented rice bran

13:40 Ardiansyah[1], Wahyudi David[1], Annisa Oktriani[1], Dody Dwi Handoko[2], Slamet Budijanto[3], Hitoshi Shirakawa[4]
[1]Dept. of Food Tech. Univ., Bakrie, Indonesia, [2]Indonesian Agency for Agric. Res., and Dev., Ministry Agric., Indonesia, [3]Fac. of Agric. Eng. and Tech., Bogor Agric. Univ., Indonesia, [4]Lab. of Nutr. Grad. Sch. of Agric. Sci., Tohoku Univ., Japan

FT2-04 (PB0728) Color stability of anthocyanin extract from wastewater of purple sweet potato starch processing

13:45 Elisa Julianti[1,2], Ridwansyah Ridwansyah[1,2], Era Yusraini[1,2]
[1]Dept. of Food Sci. and Tech., Fac. of Agric., Universitas Sumatera Utara, Indonesia, [2]Centre for Tubers and Roots Crop Study, Fac. of Agric., Universitas Sumatera Utara, Indonesia

FT2-05 (PB0720) Riceberry bran oil ameliorates oxidative stress and hepatotoxicity induced by acetaminophen overdose in mice

13:50 Rawiwan Wongpoomchai[1,2], Warunyoo Phannasorn[1], Napaporn Khuanphram[1], Suphachai Charoensin[3]
[1]Dept. of Biochem., Fac. Med., Chiang Mai Univ., Thailand, [2]Func. Food Res. Cen. for Well-Being, Chiang Mai Univ., Thailand, [3]Div. Nutr., Sch. Med Sci, Univ. Phayao, Thailand

FT2-06 (PC1602) Breeding grapefruit for low cytochrome P4503A4 inhibition

13:55 Yelena Guttman[1], Iris Yedidia[2], Adi Nudel[1], Yuliya Zhmykhova[1], Nir Carmi[2], Zohar Kerem[1]
[1]Inst. of Biochem., Food Sci. and Nutr., The Robert H. Smith Fac. of Agric., Food and Environ., The Hebrew Univ. of Jerusalem, Israel, [2]Inst. of Plant Sci., Agric. Res. Organization, Volcani Cent., Israel

FT2-07 (PD0709) Studies on nutritional and antioxidative properties of raw and instant blue rices

14:00 Puspita Sari[1], Nita Kuswardhani[1], Maryanto[1], Dewi Astuti[1], Shafira[1], Tomoyuki Yoshino[2]
[1]Dept. of Agric. Product Technol., Fac. of Agric. Technol., Univ. of Jember, Indonesia, [2]Dept. of Life Sci., Fac. of Life and Environ. Sci., Pref. Univ. of Hiroshima, Japan

FT2-08 (PD0715) Stability of encapsulated *Spirulina platensis* treated with basil leaf and different ratio of coating material against heating during storage

14:05 Tri Winarni Agustini, Ulfah Amalia, Retno Ayu Kurniasih
Dept. of Fish. Technol, Diponegoro Univ., Indonesia

FT2-09 (PA0102) Effect of the *Lactobacillus*-lemon fermented product on antioxidative activity in Clone-9 cells

14:10 Yu-Wen Huang[1], Chen-Yu Xie[1], Chih-Yao Hou[1], Shu-Ling Hsieh[1], Chih-Chung Wu[2]

[1]Dept. of Seafood Sci., Natl. Kaohsiung Univ. of Sci. and Technol., Taiwan, [2]Dept. of Food and Nutr., Providence Univ., Taiwan

FT2-10 (PA0808) Diet of anaogue rice increase insulin serum and TCF7L2 gene expression on rat model of type 2 diabetes mellitus

14:10 Rumiyati[1], Rizqa Salsabila Firdausia[1], Gravinda Widyaswara[2], Agung Endro Nugroho[1], Yekti Asih Purwestri[2], Yudi Pranoto[3], Sri Widyastuti[4], Satrijo Saloko[4], Muktasam Muktasam[5]

[1]Fac of Pharm., Universitas Gadjah Mada, Infonesia, [2]Fac of Biol., Universitas Gadjah Mada, Indonesia, [3]Fac. of Food and Agricultural Product Technol., Universitas Gadjah Mada, Indonesia, [4]Fac. of Food Technol. and Agroindustry, Universitas Mataram, Indonesia, [5]Dept. of Sosio Economic, Fac. of Agric., Universitas Mataram, Indonesia

FT2-11 (PD0609) Addition of pigeon pea for improve physicochemical properties, cooking quality and analog rice acceptability based on mocaf and seaweed

14:20 Satrijo Saloko[1], Sisca Diani Rosalina[2], Yudi Pranoto[2], Supriyadi[2], Sri Widyastuti[1], Muktasam[1], Rumiyati[2], Agung Endro Nugroho[2], Yekti Asih Purwestri[2], Janet Reid[3]

[1]Mataram Univ., Indonesia, [2]Universitas Gadjah Mada, Indonesia, [3]Massey Univ., Indonesia

FT2-12 (PC0709) Antioxidant and antiproliferation of young rice leaves (RD6 and BGR)

14:25 Visessakseth So[1,3], Wipawee Thukhammee[2,3], Jintanaporn Wattanathorn[2,3], Natthida Weerapreeyakul[3,4]

[1]Grad. Sch. (Pharm. Sci.), Fac. of Pharm. Sci., Khon Kaen Univ., Thailand, [2]Dept. of Physiol., Fac. of Med., Khon Kaen Univ., Thailand, [3]Human High Performance and Health Promotion (HHP&HP) Res. Inst., Khon Kaen Univ., Thailand, [4]Div. of Pharm. Chem., Fac. of Pharm. Sci., Khon Kaen Univ., Thailand

FT2-13 (PC1701) Supplementation of Morin attenuates oxidative stress and muscle wasting in mouse C2C12 skeletal myotubes treated with dexamethasone

14:30 Anayt Ulla, Takayuki Uchida, Yukari Miki, Kosuke Sugiura, Ayako Ohno, Reiko Nakao, Takeshi Nikawa

Dept. of Nutr. Physiol., Inst. of Med. Nutr., Tokushima Univ. Grad. Sch., Japan

FT2-14 (PB0902) Suppressive effect of garlic-odor precursor on blood-ethanol elevation

14:35 Taisei Hagio[1], Ayumu Hase[1], Yusuke Yamaguchi[1], Harumi Uto-Kondo[1], Takeshi Saito[2], Hitomi Kumagai[1]

[1]Coll. of Bioresour. Sci., Nihon Univ., Japan, [2]ACERA Food R&D Cent., ACERA Co., Ltd, Japan

FT2-15 (PA0211) Regulatory/modulatory effect of prune essence concentrate on the intestinal function and blood lipids

14:40 Kamesh Venkatakrishnan, Chin-Kun Wang

Sch. of Nutr., Chung Shan Med. Univ., Taiwan

Symposium 47 15:30-17:00 Room A

The Japanese Specific Food Labeling System – Food with Functional Claims –

Organizers: Koichi Aizawa (KAGOME Co., Ltd., Japan)
Noriyuki Monoi (Lion Co., Japan)
Chairs: Makoto Shimizu (Tokyo Univ. of Agric., Japan)
Kazutaka Yoshida (KAGOME Co., Ltd., Japan)

15:30 **Overview**

SY47-1 15:35 **An expansion of the functional food market in Japan - Put the problems into perspectives -**
Makoto Shimizu[1,2]
[1]Univ. of Tokyo, Japan, [2]Tokyo Univ. of Agric., Japan

SY47-2 16:00 **Development of functional agricultural products and the use of labeling system of "Foods with Function Claims" in Japan**
Mari Maeda-Yamamoto
Natl. Agric. and Food Res. Organization, Japan

SY47-3 16:20 **The Japanese specific food labeling system - Foods with Functional Claims**
Takeshi Morita, Nobuhiko Akasaki
Food Labelling Div., Consumer Affair Agency, Japan

SY47-4 16:40 **Health effects of adlay tea intake in healthy adults**
Hirohito Ishikawa[1], Masahiro Nakano[2], Hiroe Shinohara[2], Takamasa Masuda[1], Masashi Nagai[1], Kimiko Kazumura[3], Mika Mochizuki[4], Toshihiko Osawa[4]
[1]Healthcare Systems Co., Ltd., Japan, [2]Shin-Oyama City Hosp., Japan, [3]Hamamatsu Photonics K.K., Japan, [4]Dept. of Health and Nutr., Fac. of Psychol. and Phys. Sci., Aichi Gakuin Univ., Japan

16:55 **Closing Remarks**

Symposium 48 15:30-17:30 Room B

Co-organized by The Intestinal Microbiology Society/formerly Japan Bifidus Foundation

Probiotics & Prebiotics

Organizers: Koji Hase (Keio Univ., Japan)
Itsuko Fukuda (Kobe Univ., Japan)
Chairs: Philippe Langella (INRA, France)
Akira Hosono (Nihon Univ, Japan)

15:30 **Overview**

SY48-1 15:35 **Effects of quercetin on human intestinal microbiota and short-chain fatty acids production**

Itsuko Fukuda[1], Ro Osawa[2]
[1]Dept. of Agrobiosci., Grad. Sch. of Agric. Sci., Kobe Univ., Japan, [2]Dept. of Bioresour. Sci., Grad. Sch. of Agric. Sci., Kobe Univ., Japan

SY48-2 15:55 **Nutritional signals regulate lymphocyte homing to gut-associated lymphoid tissue**

Koji Hase[1,2]
[1]Div. of Biochem., Fac. of Pharm., Keio Univ., Japan, [2]Int. R&D Cent. for Muc. Vaccin., Inst. of Med. Sci., Univ. of Tokyo, Japan

SY48-3 16:20 **Potential of human-residential bifidobacteria**

Toshitaka Odamaki
Next Generation Sci. Inst., Morinaga Milk Ind.Co., Ltd., Japan

SY48-4 16:45 **Our intestinal microbiota as a source of next-generation probiotics for human and animal health**

Philippe Langella, R. Martin-Rosique, S. Miquel, C. Michon, C. Bridonneau, F. Chain, M. Thomas, J.M. Chatel, L. Bermudezand, H. Sokol
Commensal and Probiotics-Host Interactions Lab., Micalis Inst., INRA, AgroParisTech, Université Paris-Saclay, France

SY48-5 17:10 **Soluble dextrin fibre - New functional carbohydrates from potato starch: From structure, through innovative applications to health**

Janusz Kapusniak[1], Renata Barczynska[1], Kamila Kapusniak[2]
[1]Dept. of Dietetics and Food Studies, Jan Dlugosz Univ., Poland, [2]Dept. of Biochem., Biotech. and Ecotox., Jan Dlugosz Univ., Poland

17:25 **Closing Remarks**

Symposium 49 15:30-17:00 Room C

ACS-JSoFF Joint Session

Organizers & Chairs: Akira Murakami (Univ. of Hyogo, Japan)
Alyson E. Mitchell (Univ. of California Davis, USA)

15:30 **Overview**

SY49-1 15:35 **Kefir prevents obesity and metabolic dysfunction in mice fed high fat diets**

Hyunsook Kim[1], Dong-Hyeon Kim[2], Kunho Seo[2], Wallace Yokoyama[3]
[1]Dept. of Food and Nutr., Coll. of Ecol., Hanyang Univ., Korea, [2]Cent. for One Health, Coll. of Veterinary Med., Konkuk Univ., Korea, [3]USDA, ARS, Western Regional Res. Cent., USA

SY49-2 15:51 **Tropical fruits of Solanaceae family as health-promoting food ingredients**

Coralia Osorio[1], Tatiana Cuadrado[1], Danny Leandro Ortiz[2], Carlos Orrego[2]
[1]Dept. de Quimica, Universidad Nacional de Colombia, Colombia, [2]Inst. de Biotecnologia y Agroindustria, Universidad Nacional de Colombia, Colombia

SY49-3 16:07 **Modern analytical techniques to unravel desired and undesired bio-active compounds in food**
Michael Granvogl
Univ. of Hohenheim, Inst. of Food Chem., Section Food Chem. and Anal. Chem., Germany

SY49-4 16:23 **Enhancement of anti-inflammatory activity of *Bifidobacterium adolescentis* by polyphenols**
Kyuichi Kawabata
Fac. Clin. Nutr. Diet., Konan Women's Univ., Japan

SY49-5 16:39 **Possible abilities of dietary factors to prevent and treat diabetes via the stimulation of glucagon-like peptide-1 secretion**
Takanori Tsuda
Coll. of Biosci. and Biotechnol., Chubu Univ., Japan

16:55 **Discussion & Closing Remarks**

Symposium 50 15:30-17:30 Room D

Herbs & Spices: Function to Informatics

Organizers: Krishnapura Srinivasan (CSIR - Central Food Technol. Res. Inst., India)
Hiroe Kikuzaki (Nara Women's Univ., Japan)
Yoko Iijima (Kanagawa Inst. Technol., Japan)
Chairs: Hiroe Kikuzaki (Nara Women's Univ., Japan)
Yoko Iijima (Kanagawa Inst. Technol., Japan)

15:30 **Overview**

SY50-1 15:35 **Role of spices in human health and wellness**
Krishnapura Srinivasan
Dept. of Biochem., CSIR - Central Food Technol. Res. Inst., India

SY50-2 16:10 **Metabolomics & foodomics data science: From KNApSAcK DB to deep learning-**
Shigehiko Kanaya
Dev. of Inf. Sci, Grad. Sch. of Sci. and Technol., Nara Inst. of Sci. and Technol., Japan

SY50-3 16:40 **Biosynthesis and regulation of herb volatiles: Chemical diversity and biosynthetic evolution**
Takao Koeduka
Div. of Agric. Sci., Grad. Sch. of Sci. Tech. Innov., Yamaguchi Univ., Japan

17:10 **Closing Remarks**

Symposium 51 15:30-17:00 Room E

Co-organized by Japanese Association for Animal Cell Technology

Functional Assessment of Food Factors

Organizers: Chin-Kun Wang (Chung Shan Med. Univ., Taiwan)
Takuya Sugahara (Ehime Univ., Japan)
Hideo Satsu (Maebashi Inst. of Technol., Japan)
Chairs: Takuya Sugahara (Ehime Univ., Japan)
Hideo Satsu (Maebashi Inst. of Technol., Japan)

SY51-1 Functional assessment of propolis extracts on oral cancer
15:30 Chin-Kun Wang
Chung Shan Med. Univ., Taiwan

SY51-2 Novel health benefits of eggplant
15:55 Kozo Nakamura[1,2]
[1]Dept. of Agric., Grad. Sch. of Sci. and Tech., Shinshu Univ., Japan, [2]Inst. of Agric., Acad. Assy., Shinshu Univ., Japan

SY51-3 Nutritional and physiological significance of dietary sphingomyelin
16:20 Yutaka Miura
Div. of Appl. Biol. Sci., Grad. Sch. of Agric., Tokyo Univ. of Agric. & Tech., Japan

SY51-4 Effect of sweet potato and *Lactobacillus plantarum* Mut 7 consumption on the similarity of bacterial community on Sprague Dawley rat's digesta
16:45 Puspita M. Sari[1], Lily A. Lestari[2], Jaka Widada[3], Eni Harmayani[4]
[1]Dept. of Nutr., Universitas Respati Yogyakarta, Indonesia, [2]Dept. of Nutr., Fac. of Med., Universitas Gadjah Mada, Indonesia, [3]Fac. of Agric., Universitas Gadjah Mada, Indonesia, [4]Fac. of Agric. Tech., Universitas Gadjah Mada, Indonesia

Symposium 52 15:30-17:00 Room F

Sponsored by Amino Up Co., Ltd.

Sports and Athletic Performance

Chair: Kenji Sato (Kyoto Univ., Japan)

SY52-1 As a supporter of dreams and emotions
15:30 Yuichi Nishimura
2010・2014 FIFA World Cup Referee, Japan

SY52-2 Studies on functional foods from cell to human: An example of a standardized oligomerized-polyphenol from *Litchi chinensis* fruit extract (OPLFE)
16:30 Mikio Nishizawa
Dept. of Biomed. Sci., Coll. of Life Sci., Ritsumeikan Univ., Japan

Flash Talk Session 3 15:30-17:00 Room G

Flash Talk Presentations by Poster Presenters, Selected by ISNFF2019 Local President

Chair: Yasutaka Shigemura (Tokyo Kasei Univ., Japan)

FT3-01 (PA0504) Chlorophyll C2 uptake by Caco-2 cells through modulation of the human ATP-binding cassette transporter family

15:30 Eko Susanto[1,2], Fumiaki Beppu[1], Masashi Hosokawa[1], Kazuo Miyashita[1]

[1]Dept. of Marine Bioresour. Chem., Grad. Sch. of Fish. Sci., Hokkaido Univ., Japan, [2]Dept. Fish. Prod. Tech., Fac. Fish. and marine Sc., Diponegoro Univ., Indonesia

FT3-02 (PB0901) Garlic-odor precursor suppresses melanoma tumor growth by inducing apoptosis

15:35 Tomoya Sakaguchi[1], Tomoaki Yazaki[1], Yusuke Yamaguchi[1], Hiroyuki Hara[2], Hitomi Kumagai[1]

[1]Coll. of Bioresour. Sci., Nihon Univ., Japan, [2]Sch. of Med., Nihon Univ., Japan

FT3-03 (PB0903) Induction of phase II enzymes by a flavor compound from radish sprouts

Kazuki Ogawa, Mikio Sugiki, Yusuke Yamaguchi, Hitomi Kumagai

15:40 *Dept. of Chem. and Life Sci., Nihon Univ., Japan*

FT3-04 (PC1901) Inhibition of AGEs formation by Lotus Seedpod Oligomeric Procyanidins through RAGE-MAPK signaling and NF-κB activation in high-fat-diet rats

15:45 Qian Wu

Sch. of Food and Biol. Eng., Hubei Univ. of Technol., China

FT3-05 (PC1320) Analysis of deep sea water on lipid accumulation and inflammation in high fat diet-induced obese hamster

15:50 Min-Chun Chang[1], Shu-Ya Wu[1] Chu-Chyn Ou[1] David Pei-Cheng Lin[2], Han-Hsin Chang[1]

[1]Dept. of Nutr., Chung Shan Med. Univ., Taiwan, [2]Dept. of Med. Lab. and Biotechnol., Chung Shan Med. Univ., Taiwan

FT3-06 (PC0803) The effects of sulfuric odors of garlic and thier precursors on HDL-mediated cholesterol efflux from the macrophages

15:55 Harumi Uto-Kondo[1], Shiori Kawahara[1], Katsunori Ikewaki[2], Hitomi Kumagai[3]

[1]Dept. of Biosci. in Daily Life, Nihon Univ., Japan, [2]Dept. of Intern. Med., Natl. Def. Med. Coll., Japan, [3]Dept. of Chem. and Life Sci., Nihon Univ., Japan

FT3-07 (PD0902) Renal histopathology under the influence of Klotho gene deficiency

Yu-Shan Tseng[1], Bao-Sheng Xu[1], David Pei-Cheng Lin[2], Han-Hsin Chang[1]

16:00 *[1]Dept. of Nutr., Chung Shan Med. Univ., Taiwan, [2]Dept. of Med. Lab. and Biotechnol., Chung Shan Med. Univ., Taiwan*

FT3-08 (PD0304) Either calf or mid-arm circumference could be a simple marker for screening of pre-sarcopenia in the middle-aged elderly

16:05 Po-Sheng Chang[1], Chi-Hua Yen[2,3,4], Ching-Ju Chiu[1], Yu-Yun Huang[1], Ping-Ting Lin[1]

[1]Dept. of Nutr., Chung Shan Med. Univ., Taiwan, [2]Sch. of Med., Chung Shan Med. Univ., Taiwan, [3]Dept. of Family and Community Med., Chung Shan Med. Univ. Hosp., Taiwan, [4]Cent. for Education and Res. on Geriatrics and Gerontology, Chung Shan Med. Univ., Taiwan

FT3-09 (PD0702) Comparative analysis of rhodophyta extra and DHA algal oil formula for mitigation of dry eye symptoms induced by UVB irradiation in a mouse model

16:10 Tsung-Han Lu[1], Ying-Chih Tung[2], Chia-Yun Hsu[1], Meng-Tien, Hsieh[1], Ya-Jing Liu[1], Han Hsin-Chang[3], David Pei-Cheng Lin[1]

[1]Dept. of Med. Lab. and Biotechnol., Chung Shan Med. Univ., Taiwan, [2]Taiyen Biotech Co., Ltd., Taiwan, [3]Dept. of Nutr., Chung Shan Med. Univ., Taiwan

FT3-10 (PC1212) Effects of spontaneous exercise on NASH pathology in the CDAHFD-fed mouse model

16:15 Yuya Kitada[1], Shiori Ikeda[1], Atsushi Miura[1,2], Yori Ozaki-Masuzawa[2], Takashi Hosono[1,2], Taiichiro Seki[1,2]

[1]Dept. of Appl. Life Sci., Grad. Sch. of Bioresour. Sci., Nihon Univ., Japan, [2]Dept. of Chem. and Life Sci., Coll. of Bioresour. Sci., Nihon Univ., Japan

FT3-11 (PC0607) Fish oil ameliorates cognitive impairment by suppressing hippocampal inflammation and amyloid-β deposition

16:20 Sachiko Okue[1], Mai Takahashi[2], Riku Orihara[2], Eimi Ishikawa[2], Ayako Ueno[2], Takashi Saito[3], Takaomi C. Saido[3], Yori Ozaki-Masuzawa[2], Takashi Hosono[1,2], Taiichiro Seki[1,2]

[1]Dept. of Appl. Life Sci., Grad. Sch. of Bioresour. Sci., Nihon Univ., Japan, [2]Dept. of Chem. and Life sci., Coll. of Bioresour. Sci., Nihon Univ., Japan, [3]RIKEN Cent. for Brain Sci., Japan

FT3-12 (PC1309) The effect of Tetrahydrocurcumin inhibits TNF-alpha induced insulin resistant

16:25 Yi-Zhen Tsai[1], Chi-Tang Ho[2], Min-Hsiung Pan[3], Ching-Shu Lai[1]

[1]Dept. of Sea. Sci., Nat. Kaohsiung. Univ. of Sci. and Tech., Taiwan, [2]Dept. of Food. Sci., Rutgers Univ., USA, [3]Inst. of Food. Sci. and Tech., Nat. Taiwan Univ., Taiwan

FT3-13 (PC1308) Tetrahydrocurcumin suppression of DEHP promoted high fat diet induced nonalcoholic fatty liver disease and its molecular mechanisms of action

16:30 Yu-Chi Chu[1], Mei-Ling Tsai[1], Chi-Tang Ho[2], Ching-Shu Lai[1]

[1]Dept. of Sea. Sci., Nat. Kaohsiung. Univ. of Sci. and Tech., Taiwan, [2]Dept. of Food. Sci., Rutgers Univ., USA

FT3-14 (PC0505) The effectivity of difructose anhydride III (DFA III) to increase absorption of calcium in rat femur bone of calcium deficient model

16:35 Ainia Herminiati[1], Rimbawan[2], Budi Setiawan[2], Dewi Apri Astuti[3], Linar Zalinar Udin[4], Sri Pudjiastuti[4]

[1]Res. Cent. for Appropriate Technol., Indonesian Inst. of Sci., Indonesia, [2]Dept. of Community Nutr., Fac. of Human Ecol., IPB Univ., Indonesia, [3]Dept. of Nutr. and Feed Technol., Fac. of Animal Sci., IPB Univ., Indonesia, [4]Res. Cent. for Chem., Indonesian Inst. of Sci., Indonesia

FT3-15 (PD0618) Effects of polyphenol preservation liquid combined with vacuum packaging on the preservation of mackerel

16:40 Yuan-de Shi, Rui Ou Yang, Zhi-hui Wang, Li-peng Li, Wen-tao Chen, Lei-wen Xiang

Fuqing Branch, Fujian Normal Univ., China

December 5

Plenary Lectures 7 & 8 — 8:30-9:30 Room A

Chair: Yoshimasa Nakamura (Okayama Univ., Japan)

PL7 8:30 **A novel system related to mitochondrial-leaked electrons is a target of functional food**

Pingfan Rao[1], Jingke Guo[1], Huaiyu Gu[2], Shutao Liu[3]
[1]Coll. of Food Sci. and Biotechnol., Zhejiang Gongshang Univ., China, [2]Med. Sch., Sun Yat-Sen Univ., China, [3]Coll. of Biol. Sci. and Eng., Fuzhou Univ., China

Chair: Kaeko Murota (Shimane Univ., Japan)

PL8 9:00 **Research and development of functional foods in Japan - History and perspectives**

Makoto Shimizu[1,2]
[1]Univ. of Tokyo, Japan, [2]Tokyo Univ. Agric., Japan

Symposium 53 — 9:45-11:45 Room A

Human Studies of Functional Food Factors

Organizers & Chairs: Masuko Kobori (Food Res. Inst. Natl. Agric. and Food Res. Org., Japan)
Daniel Hwang (Univ. of California, USA)

SY53-1 9:45 **Suggested mechanisms of action of dietary quercetin on cognitive function**

Masuko Kobori, Yumiko Takahashi
Food Res. Inst., Natl. Agric. and Food Res. Org., Japan

SY53-2 10:00 **A randomized, double-blind, placebo-controlled study evaluating the effects of quercetin-rich onions on cognitive function in elderly subjects**

Jun Nishihira[1], Mie Nishimura[1], Toshiyuki Nakagawa[2], Takato Muro[3], Masuko Kobori[4]
[1]Dept. of Med. Management Informatics, Hokkaido Information Univ., Japan, [2]Dept. of Neurobiol., Gifu Univ., Grad. Sch. of Med., Japan, [3]Hokkaido Agric. Res. Cent., NARO, Japan, [4]Food Res. Inst., NARO, Japan

SY53-3 10:25 **Alleviating effects of hericium erinaceus fermented mycelium on mild cognitive impairment**

Han-Hsin Chang[1], David Pei-Cheng Lin[2], Wen-Jui Chang[3], Chin-Chu Chen[4]
[1]Dept. of Nutr., Chung Shan Med. Univ., Taiwan, [2]Dept. of Med. Lab. and Biotechnol., Chung Shan Med. Univ., Taiwan, [3]Dept. of Ophthalmol., Landseed Intl. Hosp., Taiwan, [4]Biotech Res. Inst., Grape King Bio Ltd, Taiwan

SY53-4 10:50 **Clinical trials for a new, high-functional Japanese diet: focusing on natto and brown rice**

Koichi Hashimoto, Risa Araki
Dept. of Clin. and Transl. Res. Methodol., Univ. of Tsukuba, Japan

SY53-5 11:15 **Single-meal intervention study with blueberry powder and docosahexaenoic acid supplementation to assess postprandial inflammation in humans**
Daniel Hwang, Shurong Huang, Zhenzhen Mo, Liping Huang, Danielle Lemay
Western Human Nutr. Res. Cent., ARS/USDA and Dept. of Nutr., UC Davis, USA

Symposium 54 9:45-11:45 Room B

Co-organized by The NARO Bio-oriented Technology Research Advancement Institution

Japanese Diets

Organizer: Tsuyoshi Tsuduki (Tohoku Univ., Japan)
Chairs: Ichiro Tsuji (Tohoku Univ., Japan)
Tsuyoshi Tsuduki (Tohoku Univ., Japan)

SY54-1 9:45 **Research on development and applying an assessment method for the Japanese dietary pattern contributing to global health**
Ichiro Tsuji
Div. of Epidemiology, Dept. of Health Informatics & Public Health, Tohoku Univ. Grad. Sch. of Med., Japan

SY54-2 10:00 **The development of an index score that represents the characteristics of the Japanese diet**
Shu Zhang, Yasutake Tomata, Ichiro Tsuji
Div. of Epidemiol., Grad. Sch. of Med., Tohoku Univ., Japan

SY54-3 10:22 **Evaluation of the health benefits of the Japanese diet**
Tsuyoshi Tsuduki
Grad. Sch. of Agric. Sci., Tohoku Univ., Japan

SY54-4 10:44 **Sustainable protein nutrition with Dashi/umami**
Hisayuki Uneyama
Global Communications Dept., Ajinomoto Co., Inc., Japan

SY54-5 11:06 **Association of diets with intestinal microbiome in Asians**
Jiro Nakayama
Div. of Systems Bioeng., Dept. of Biosci. Biotechnol., Fac. of Agric., Grad. Sch., Kyushu Univ., Japan

SY54-6 11:28 **Effects of a carbohydrate-restricted diet on aging in senescence-accelerated prone mice**
Chaoqi He, Qiming Wu, Tsuyoshi Tsuduki
Grad. Sch. of Agric. Sci., Tohoku Univ., Japan

11:43 **Closing Remarks**

Symposium 55 9:45-11:45 Room C

Skeletal Muscle Health

Organizer: Sue-Joan Chang (Natl. Cheng Kung Univ., Taiwan)
Chairs: Sue-Joan Chang (Natl. Cheng Kung Univ., Taiwan)
Yoshiharu Shimomura (Chubu Univ., Japan)

SY55-1 Food factors for skeletal muscle health
9:45 Sue-Joan Chang
Dept. of Life Sci., Natl. Cheng Kung Univ., Taiwan

SY55-2 The role of branched-chain amino acids (BCAAs) in regulation of muscle protein metabolism and physical activity
10:15 Yoshiharu Shimomura[1], Yasuyuki Kitaura[2]
[1]Dept. of Food and Nutr. Sci., Coll. of Biosci. and Biotechnol., Chubu Univ., Japan, [2]Lab. of Nutr. Biochem., Grad. Sch. of Bioagric. Sci., Nagoya Univ., Japan

SY55-3 Regulation of muscle protein degradation by dietary leucine and lysine
10:45 Takashi Nagasawa[1], Tomonori Sato[2], Nao Muramatsu[3], Yoshiaki Ito[1]
[1]Dept. of Biol. Chem. and Food Sci., Fac. of Agric., Iwate Univ., Japan, [2]Div. of Bioresour. Sci., United Grad. Sch. of Agric. Sci., Iwate Univ., Japan, [3]Div. of Biol. Chem. and Food Sci., Grad. Sch. of Agric Sci. Iwate Univ., Japan

SY55-4 *Lactococcas lactis* subsp. *cremoris* FC-fermented milk intake modulates energy metabolism in mouse skeletal muscle
11:15 Wataru Aoi[1], Yayoi Gotoh[2], Hideki Kosaka[2], Toshio Suzuki[2]
[1]Div. of Appl. Life Sci., Grad. Sch. of Life Environ. Sci., Kyoto Pref. Univ., Japan, [2]Fujicco Co., Ltd., Japan

SY55-5 Omega-3 fatty acids-enriched fish oil activates AMPK/PGC-1α signaling and prevents obesity-related skeletal muscle wasting
11:30 Shing-Hwa Liu[1], Chen-Yuan Chiu[2], Lou-Pin Wang[3], Meng-Tsan Chiang[3]
[1]Inst. of Toxicol., Natl. Taiwan Univ., Taiwan, [2]Inst. of Food Safety and Health, Natl. Taiwan Univ., Taiwan, [3]Dept. of Food Sci., Natl. Taiwan Ocean Univ., Taiwan

Symposium 56 9:45-11:45 Room D

Soy and Isoflavone Metabolites

Organizers: Johanna W. Lampe (Fred Hutchinson Cancer Res. Cent., USA)
Mariko Uehara (Tokyo Univ. of Agric., Japan)
Tatsuya Moriyama (Kindai Univ., Japan)
Chairs: Johanna W. Lampe (Fred Hutchinson Cancer Res. Cent., USA)
Mariko Uehara (Tokyo Univ. of Agric., Japan)

9:45 **Overview**

SY56-1 9:47 **Soy isoflavones and the gut microbiome: equol and *O*-desmethylangolensin phenotypes in relation to human health**
Johanna W. Lampe
Div. of Public Health Sci., Fred Hutchinson Cancer Res. Cent., and Dept. of Epidemiol., Univ. of Washington, USA

SY56-2 10:22 **Proposal as a complementary medical food material in dyslipidemia and inflammation by soybean protein and its peptide**
Mitsutaka Kohno
Planning Dept. R & D Div., Fuji Oil Co., Ltd., Japan

SY56-3 10:52 **The timing effect of soy protein intake on mice intestinal microbiota**
Konomi Tamura[1], Hiroyuki Sasaki[1,2], Kazuto Shiga[1], Yuki Nakayama[1], Shigenobu Shibata[1]
[1]Lab. of Physiol. and Pharm., Sch. of Advanced Sci. and Eng., Waseda Univ., Japan, [2]AIST-Waseda Univ. Computational Bio Big-Data Open Innovation Lab. (CBBD-OIL), Japan

SY56-4 11:05 **Compositional and functional differences in human gut microbiome with respect to equol production and its association with blood lipid level: a cross-sectional study**
Yumei Zhang[1,2]
[1]Dept. of Nutr. and Food Hyg., Sch. of Public Health, Peking Univ. Health Sci. Cent., China, [2]Beijing Key Lab. of Toxicol. Res. and Risk Assess. for Food Safety, China

11:40 **Closing Remarks**

Symposium 57 9:45-11:15 Room E

Sponsored by KAGOME Co., Ltd.

Tomatoes – Health Benefits and Its Components

Organizers: Junji Terao (Konan Women's Univ., Japan)
Koichi Aizawa (KAGOME Co., Ltd., Japan)
Chair: Junji Terao (Konan Women's Univ., Japan)

9:45 **Overview**

SY57-1 9:50 **Mechanistic understanding healthy benefits of tomato and lycopene**
Xiang-Dong Wang
J-M USDA Human Nutr. Res. Cent. on Aging at Tufts Univ., USA

SY57-2 10:20 **Useful compounds in tomato for the management of obesity-related metabolic disorders**
Tsuyoshi Goto[1,2], Haruya Takahashi[1,3], Shinsuke Mohri[1], Takeshi Ara[1,3], Wataru Nomura[1,2], Huei-Fen Jheng[1], Daisuke Shibata[3,4], Teruo Kawada[1,2]
[1]Div. of Food Sci. and Biotechnol., Grad. Sch. of Agric., Kyoto Univ., Japan, [2]Res. Unit for Physiol. Chem. C-PIER, Kyoto Univ., Japan, [3]KAGOME Tomato Discoveries Lab. Grad. Sch. of Agric., Kyoto Univ., Japan, [4]Kazusa DNA Res. Inst., Japan

SY57-3 Tomato metabolome analysis for designing the functional foods
10:40 Takeshi Ara[1,2], Shingo Takahashi[2], Naoko Waki[2], Nozomu Sakurai[3], Koichi Aizawa[2], Hiroyuki Suganuma[2], Yasuki Matsumura[4], Teruo Kawada[1,5], Daisuke Shibata[2,3]
[1]Div. Food Sci. and Biotechnol., Grad. Sch. of Agric., Kyoto Univ., Japan, [2]KAGOME Tomato Discoveries Lab., Grad. Sch. of Agric., Kyoto Univ., Japan, [3]Kazusa DNA Res. Inst., Japan, [4]Div. Agro. Hort. Sci., Grad. Sch. Agric., Kyoto Univ., Japan, [5]Res. Unit for Physiol. Chem. C-PIER, Kyoto Univ., Japan

SY57-4 Development of foods with function claims based on the health benefits of tomato-derived nutrients
11:00 Kazutaka Yoshida, Takuro Inoue, Koichi Aizawa
Innovation Div., KAGOME Co., Ltd., Japan

11:15 **Closing Remarks**

Symposium 58 9:45-11:45 Room F

Sponsored by NUTRILITE

Phytonutrients: Living Well and Living Well Longer

Chair: Ji Yeon Kim (Seoul Natl. Univ. of Sci. and Technol., Korea)

SY58-1 Diet, health and longevity: Highlights from the Okinawa Centenarian Study, the Hawaii Lifespan Study and other nutrition-related studies
9:45 Bradley J. Willcox[1,2,3]
[1]Dept. of Geriatric Med., John A. Burns Sch. of Med., Univ. of Hawaii & Kuakini NIH, USA, [2]Cent. of Excellence for Clin./Transl. Aging Res., USA, [3]Okinawa Res. Cent. for Longevity Sci., Japan

SY58-2 Elucidation of pharmacological action of natural medicines
10:15 Haruki Yamada[1,2,3]
[1]Kitasato Univ., Japan, [2]Dept. Pharm., Tokyo Univ. Pharm. Life. Sci, Japan, [3]Kitasato Res. Ctr. for Environ. Sci., Japan

SY58-3 Rice function for disease prevention and establishment of medical rice association
10:45 Shaw Watanabe
Life Sci. Promotion Found., Japan

11:20 **Panel Discussion**

Poster Sessions

A) Sources and Products: Fermented Foods and Beverages

PA0101 Co-fermentation of *Monascus purpureus* and *Saccharomyces cerevisiae* enhanced the flavor of Chinese sweet rice wine

Sheng Yin[1,2,3], Yixin Che[1,2,3], Wenxian Liu[1,2,3], Miao Yu[1,2,3]

[1]Sch. of Food and Health, Beijing Technol. & Business Univ.(BTBU), China, [2]Beijing Advanced Innovation Cent. for Food Nutr. and Human Health, BTBU, China, [3]Beijing Eng. and Technol. Res. Cent. of Food Additives, BTBU, China

PA0102 Effect of the *Lactobacillus*-lemon fermented product on antioxidative activity in Clone-9 cells

Yu-Wen Huang[1], Chen-Yu Xie[1], Chih-Yao Hou[1], Shu-Ling Hsieh[1], Chih-Chung Wu[2]

[1]Dept. of Seafood Sci., Natl. Kaohsiung Univ. of Sci. and Technol., Taiwan, [2]Dept. of Food and Nutr., Providence Univ., Taiwan

PA0103 Development of Tempeh from jack bean and soybean and its functional properties as ACE (angiotensin converting enzyme) inhibitor

Andriati Ningrum, Indra Sofiana Hesti, Sri Anggrahini, Widiastuti Setyaningsih

Dept. of Food Sci. and Agric. Product Technol., Fac. of Agric. Technol.,Gadjah Mada Univ., Indonesia

PA0104 Evaluation of bioactivity of abalone visceral fermented product by lactic acid bacteria

Yushi Fujimura[1], Mariko Shimura[2], Naoko Hamada-Sato[3]

[1]Grad. Sch. of Safety Management of Food Supply Chain, Tokyo Univ. of Marine Sci. and Technol., Japan, [2]BULL-DOG SAUCE Co., Ltd., Japan, [3]Dept. of Food Sci. and Technol., Tokyo Univ. of Marine Sci. and Technol., Japan

PA0105 Novel transglycosylation products, ethyl-d-(iso)maltosides, in a traditional Japanese alcoholic beverage, sake

Yusuke Kojima[1], Satomi Matsumura[2], Ryo Katsuta[1], Izumi Kobayashi[1], Chihiro Honda[1], Izumi Wagatsuma[1], Hitoshi Shindo[1], Masaru Hosaka[1], Masafumi Tokuoka[1]

[1]Dept. of Ferment. Sci. and Tech., Grad. Sch. of Agric., Tokyo Univ. of Agric., Japan, [2]Dept. of Ferment. Sci., Fac. of Appl. Biosci., Tokyo Univ. of Agric., Japan

PA0106 Structural analysis of oligosaccharides in a traditional Japanese alcoholic beverage, sake

Chihiro Honda[1], Ryo Katsuta[1], Ayane Mamiya[2], Nanako Okada[2], Takuya Kawamura[2], Mariko Yamada[1], Hitoshi Shindo[1], Masaru Hokasa[1], Masafumi Tokuoka[1]

[1]Dept. of Ferment. Sci. and Tech., Grad. Sch. of Agric., Tokyo Univ. of Agric., Japan, [2]Dept. of Ferment. Sci., Fac. of Appl. Biosci., Tokyo Univ. of Agric., Japan

PA0107 An exopolysaccharide from *Lactobacillus plantarum* H31 in pickled cabbage inhibits pancreas α-amylase

Zhenghua Huang, Fuxing Lin, Xiaoyu Zhu, Mengxi Jiang, Zhaoxin Lu

Coll. of Food Sci. and Technol., Nanjing Agric. Univ., China

PA0108 Influence on Cheddar cheese proteolysis and sensory characteristics of non-starter strain *Lactobacillus plantarum*

Weiwei Bi[1,2,4], Guixing Zhao[2,3,4], Guangjin Wang[2], Bixian Zhang[1,2], Shuwen Lu[5], Haofei Liu[2], Jinrong Li[2], ,Lei Chen[2]

[1]Heilongjiang Academy of Agric. Sci. Post-Doctoral Station, China, [2]Soybean Res. Inst., Heilongjiang Academy of Agric. Sci., China, [3]Coll. of Food Sci. and Eng., Harbin Univ. of Commerce, China, [4]Grain and Corn Eng. Technol. Res. Cent., China State Administration of Grain, China, [5]Inst. of Food Res., Heilongjiang Academy of Agric. Sci., China

PA0109 Effects of sake lees materials in the adipocyte differentiation gene expression

Yuki Motono[1], Takeshi Imai[2], Takafumi Iguchi[3], Motoko Takaoka[4]

[1]Dept. of Human Sci, Grad. Sch, Kobe Col., Japan, [2]Hyogo Pref. Inst. of Technol., Japan, [3]YAEGAKI Bio-ind., Inc., Japan, [4]Dept. of Biosphere Sci., Kobe Col., Japan

PA0110 Study of conditions and product development of beer brewed with djulis (*Chenopodium formosarum Koidz*) and barley malt

Shih-Yu Wang, Te-Hua Liu, Meng-Chun Cheng, Tsung-Yu Tsai

Dept. of Food Sci., Fu Jen Cathol.Univ., Taiwan

PA0114 Improvement in the catalytic performance of *Lp*PPR, a *Lactobacillus plantarum* phenylpyruvate reductase, based on the rational design

Jianfang Li[1], Minchen Wu[2], Ting Zhang[1], Bochun Hu[3], Xiongfeng Xu[3], Fengjiao Yuan[1]

[1]Sch. of Food Sci. and Tech., Jiangnan Univ., China, [2]Wuxi Sch. of Med., Jiangnan Univ., China, [3]Sch. of Biotech., Jiangnan Univ., China

A) Sources and Products: Fruits and Vegetables

PA0201 Microwave-assisted extraction and ultrasound-assisted extraction for quantifying triterpenoid in *Momordica charantia* Linn. var. *abbreviata* Ser.

Sui Qing Huang[1], Yi Jou Lin[2], Yu Tsung Lee[2], Jen Fang Liu[1,2], Li Heng Pao[1], Chun-Hui Chiu[1,3]

[1]Grad. Inst. of Health Ind. and Technol., Chang Gung Univ. of Sci. and Technol., Taiwan, [2]Dept. of Nutr., Chang Gung Memorial Hosp., Taiwan, [3]Dept. of Traditional Chinese Med., Chang Gung Memorial Hosp., Taiwan

PA0202 Analysis of the aroma components of Niigata edible chrysanthemums

Chigusa Tateyama[1], Kiharu Igarashi[2]

[1]Fac. of Human Life Studies, Univ. of Niigata Prefecture, Japan, [2]Fac. of Agric., Yamagata Univ., Japan

PA0203 Deterioration inhibitory effect on citrus fruit flavor by the functional ingredient included in immature persimmon "Tekka-kaki"

Natsumi Ohnishi[1], Mizusa Wada[1], Miho Inoue[1], Yoshiyuki Watanabe[2], Kenich Kanno[3], Akiyoshi Sawabe[1]

[1]Dept. of Appl. Biological Chem., Fac. of Agric., Kindai Univ., Japan, [2]Dept. of Biotechnol. and Chem., Fac. of Eng., Kindai Univ., Japan, [3]Dept. of Biol. and Environ. Chem., Kindai Univ., Japan

PA0204 Changes in amounts of quercetin and monosaccharides in onion bulb during dry by a characteristic hanging method in Awaji Island

Ko Kanazawa[1], Fumika Himoto[1], Hiroyuki Okui[2]

[1]Dept. of Brewing., Fac. of Agric., Kibi Intl. Univ., Japan, [2]Minami Awaji Agric. Improvement Guidance Cent., Awaji District Administration Office., Hyogo Prefecture Gov., Japan

PA0206 Preparation of immobilized pectinase and clarification effects on *Physalis pubescens L.* juice

Ying-Hua Tian, Xiao-lan Liu

Coll. of Food and Biological Eng., Qiqihar Univ., China

PA0207 Effect of controlled pre-treatments on α-glucosidase inhibitory activity of wild edible vegetable (*Stenochlaena palustris*) extract

Della Rahmawati[1], Maria DPT Gunawan Puteri[1], Jevon Ardi Santoso[1], Stevan Teji[1], Eisuke Kato[2], Yanetri Asi Nion[3]

[1]Dept. of Food Tech., Fac. of Life Sci. and Tech., Swiss German Univ., Indonesia, [2]Food Biochem., Div. of Appl. Biosci., Grad. Sch. of Agri., Hokkaido Univ., Japan, [3]Dept. of Agronomy, Agrotech Div., Palangka Raya Univ., Indonesia

PA0208 Anticancer, antioxidant, and α-glucosidase inhibitory activity of selected Thai indigenous vegetables

Anuchita Moongngarm, Siriporn Lawan, Jintana Sangsopha, Sunisa Roiduong

Dept. of Food Tech. and Nutr. Fac. of Technol., Mahasarakham Univ., Thailand

PA0209 Agri-food by-products as source of bioactive compounds: polyphenols and polysaccharides

Mohamad Khatib[1], Lorenzo Cecchi[1], Enrica Bargiacchi[2], Sergio Miele[2], Nadia Mulinacci[1]

[1]Dept. of Neurofarba, Nutraceutical Section, UNIFI, Italy, [2]Consortium INSTM, Italy

PA0210 Assessment of the putative healthy effect of the green noodle from banana flour and natural green colorant

Rujikarn Chaisanam[1,3], Wattanathorn Jintanaporn[2,3]

[1]Physiol. Dept., Grad. Sch. (NSc Program), Fac. Med., Khon Kaen Univ., Thailand, [2]Physiol. Dept., Fac. Med., Khon Kaen Univ., Thailand, [3]Res. Inst. For HHP&HP, Khon Kaen Univ., Thailand

PA0211 Regulatory/modulatory effect of prune essence concentrate on the intestinal function and blood lipids

Kamesh Venkatakrishnan, Chin-Kun Wang

Sch. of Nutr., Chung Shan Med. Univ., Taiwan

PA0212 Effects of vitamin B_{12} supplementation on vitamin C synthesis in hydroponic vegetables

Mahiro Seki, Yukinori Yabuta, Fumio Watanabe, Tomohiro Bito

Fac. of Agric., Tottori Univ., Japan

PA0213 Chemoprevention of 1,2-dimethoxybenzoquinone isolated from *V. coignetiae* on NNK induced lung tumorigenesis in A/J mice

Hirono Nakashima[1], Kyohei Daimaru[1], Kensuke Sasaki[1], Yusuke Saiki[1], Ryoko Hida[1], Naoko Miyake[1], Nana Fujii[1], Hisao Kubo[2], Katsuyuki Kiura[2], Sakae Arimoto-Kobayashi[1]

[1]Div. Pharm. Sci., Grad. Sch. of Med. Den. Pharm. Sci., Okayama Univ., Japan, [2]Dept. of Med., Okayama Univ. Med. Sch., Japan

PA0214 The effect of Japanese persimmon (*Diospyros kaki*) extract on the prevention of sarcopenia

Nayla M. Alfarafisa[1], Kohji Kitaguchi[1,2], Tomio Yabe[1,2,3]

[1]United Grad. Sch. of Agric. Sci., Gifu Univ., Japan, [2]Fac. of Appl. Biol. Sci., Gifu Univ., Japan, [3]G-CHAIN, Japan

PA0215 Effect of apple juice on intestinal microbiota for gastrointestinal health

Risako Kon, Mayumi Okuma, Rei Tomimoto, Misato Toyonaga, Nahoko Mochizuki, Natsumi Fujitate, Takumi Togashi, Manami Ozaki, Nobutomo Ikarashi, Hiroyasu Sakai, Junzo Kamei

Dept. of Biomol. Pharmacol., Hoshi Univ., Japan

PA0216 Effect of daily intake of the High-Lycopene Tomato, a variety named "PR-7", on lipid metabolism: a randomized, double-blind, placebo-controlled study

Mie Nishimura[1], Naoki Tominaga[2], Kouji Satoh[1], Yuko Ishikawa-Takano[3], Mari Maeda-Yamamoto[4], Jun Nishihira[1]

[1]Dept. Med. Management and Informatics, Hokkaido Information Univ., Japan, [2]Plant Breeding and Experiment Station, Takii & Co., Ltd., Japan, [3]Food Function Div., Natl. Food Res. Inst., Natl. Agric. and Food Res. Org. (NARO), Japan, [4]NARO, Japan

PA0217 Metabolomics-based approach for the evaluation of different postharvest treatment in climacteric tropical fruits

Sastia P. Putri[1], Anjaritha A. R. Parijadi[1], Sobir Ridwani[2], Fenny M. Dwivany[3], Eiichiro Fukusaki[1]

[1]Dept. of Biotech., Grad. Sch. of Eng., Osaka Univ., Japan, [2]Cent. of Tropical Horticultural Studies, Bogor Agric. Univ., Indonesia, [3]Dept. of Biotech., Sch. of Life Sci. and Tech., Institut Teknologi Bandung, Indonesia

PA0218 Choline esters and choline in cultivated vegetables and fruits

WenHao Wang[1], Shohei Yamaguchi[2], Masahiro Koyama[3], Su Tian[4], Aya Ino[5], Koji Miyatake[6], Kozo Nakamura[1,7]

[1]Dept. of Agric., Grad. Sch. of Sci. and Tech., Shinshu Univ., Japan, [2]Dept. of Sci. and Tech., Grad. Sch. of Med. Sci. and Tech., Shinshu Univ., Japan, [3]Wellnas. Co., Ltd., Japan, [4]Dept. of Nutr. and Food Hyg., Sch. of Public Health, Hebei Med. Univ., China, [5]Kochi Agric. Res. Cent., Japan, [6]Inst. of Vegetable and Floriculture Sci., NARO, Japan, [7]Inst. of Agric. Acad. Assy., Shinshu Univ., Japan

PA0219 Consideration on the relationship between the change of raspberry cultivation condition and the amount of flavan-3-ol derivatives

Ryo Kobori[1], Seiya Hashimoto[1], Takashi Kawasaki[2], Akiko Saito[1]

[1]Advanced Sci. and Eng., Grad. Sch. of Eng. Osaka Electro-Communication Univ. (OECU), Japan, [2]Res. Inst. for Sustainable Humanosphere, Kyoto Univ., Japan

PA0221 Antibacterial effects and the mechanisms of pterostilbene against foodborne pathogens

Rong-Jane Chen, Yu-Hsuan Shih

Dept. of Food Safety/Hygiene and Risk Management, Coll. of Med., Natl. Cheng Kung Univ., Taiwan

A) Sources and Products: Herbs and Spices

PA0301 Anti-glycation effects of *Silybum marianum* extracts on human αA-crystallins

Yen-Ju Yang[1], Yi-Ping Yu[2], Chun-Ping Lu[1]

[1]Dept. of Food Sci., Fu Jen Catholic Univ., Taiwan, [2]Dept. of Nutr. and Health Sci., Chinese Culture Univ., Taiwan

PA0302 Chemical composition and antioxidant activities of nutmeg essential oil

Rong Li[1], Ying Wang[1], Jin Tan[1], Shu-Hua Tang[1], Zi-Tao Jiang[1,2]

[1]Coll. of Biotechnol. Food Sci., Tianjin Univ. of Comm., China, [2]Sch. of Food Eng., Tianjin Tianshi Coll., China

PA0303 *Kaempferia parviflora* extract and its polymethoxyflavonoid enhance testosterone production in mouse testis-derived tumor cells

Satoru Horigome[1,2], Misato Maeda[2], Hsin-Jung Ho[2], Hitoshi Shirakawa[2], Michio Komai[2]

[1]Japan Food Res. Lab., Japan, [2]Lab. of Nutr., Grad. Sch. of Agric. Sci., Tohoku Univ., Japan

PA0304 Constituents of coriander leaves involved in antioxidant and anti-allergic activities

Rika Ohara[1], Yurika Kitamura[2], Takuya Sugahara[2], Hiroyuki Onda[3], Nanami Yoshino[3], Hiroe Kikuzaki[4]

[1]Dept. of Food and Nutr. Sci. Grad. Sch. of Humanities and Sci., Nara Women's Univ., Japan, [2]Grad. Sch. of Agric., Ehime Univ., Japan, [3]Cent. Res. Inst., S&B Foods Inc., Japan, [4]Dept. of Food Sci. and Nutr., Nara Women's Univ., Japan

PA0305 The potential neuroprotective effect against stroke of five Thai spice

Thongwong Putthiwat[1,3], Wattanathorn Jintanaporn[2,3], Muchimapura Supaporn[2,3], Thukham-mee Wipawee[2,3], Wannanon Panakaporn[2,3]

[1]Physiol. Dept., Grad. Sch. (NSc Program), Fac. Med., Khon Kaen Univ., Thailand, [2]Physiol. Dept., Fac. Med., Khon Kaen Univ., Thailand, [3]Res. Inst. For HHP&HP, Khon Kaen Univ., Thailand

PA0306 Assessment the neuroprotective potential of "TJ1", the novel polyherbal functional drink

Thuntiva Nakyam[1,3], Jintanaporn Wattanathorn[2,3], Supaporn Muchimapura[2,3], Wipawee Thukham-mee[2,3], Panakaporn Wannanon[2,3]

[1]Physiol. Dept., Grad. Sch. (NSc Program), Fac. Med., Khon Kaen Univ., Thailand, [2]Physiol. Dept., Fac. Med., Khon Kaen Univ., Thailand, [3]Res. Inst. For HHP&HP, Khon Kaen Univ., Thailand

PA0307 Study on the effect of dioscin on anxiety/depression-like behavior in ovariectomized mice

Keisuke Watanabe, Naoki Katayama, Yukari Egashira, Shizuka Hirai

Lab. of Food Nutr., Grad. Sch. of Hort., Chiba Univ., Japan

PA0308 Effect of *Cratoxylum formosum* ssp. *pruniflorum* extract on cell cycle and proliferation of carcinoma liver cancer cell HepG2

Karnchanok Kaimuangpak[1,2], Natthida Weerapreeyakul[2,3]

[1]Grad. Sch. (Res. and Dev. in Pharm. program), Khon Kaen Univ., Thailand, [2]Div. of Pharm. Chem., Fac. of Pharm. Sci., Khon Kaen Univ., Thailand, [3]Human High Performance and Health Promotion (HHP&HP) Res. Inst., Khon Kaen Univ., Thailand

PA0309 Erucic acid-rich yellow mustard oil prevents both obesity/type 2 diabetes and low turnover osteoporosis

Asako Takahashi, Mayu Ishizaki, Yukari Egashira, Shizuka Hirai

Lab. of Food Nutr., Grad. Sch. of Hort., Chiba Univ., Japan

PA0310 Preparation of heat-induced semen armeniacae amarum protein nanoparticles and the encapsulation of paclitaxel

Jianwu Zhou[1], Dai Lin[2], Guanzhen Gao[1], Huiqin Wang[1], Lijing Ke[1], Pingfan Rao[1]

[1]Food Nutr. Sci. Cent., Sch. of Food Sci. and Biotechnol., Zhejiang Gongshang Univ., China, [2]Fujian Med. Univ., China

PA0311 Optimization of solar and mechanical drying methods to obtain the optimum flavor and bio-activities in ginger (*Zingiber officinale L*) powders

Christofora Hanny Wijaya[1,2], G. Permata Heru[2], Lucia C. Soedirga[2], E. Bimo Aksono[3], Eko H. Purnomo[1], Triyati D . Kencana W[4], R.R. Fosa Sarassina[5]

[1]Fac. of Agric, and Eng. Technol., Bogor Agric. Univ.(IPB Univ.), Indonesia, [2]Fac. of Sci. and Technol., Univeristas Pelita Harapan, Indonesia, [3]Fac. of Veterinary Med., Surabaya, Airlangga, Indonesia, [4]Fac. of Math. and Nat. Sci., Institut Teknologi Bandung, Indonesia, [5]Sch. of Vocation, Universitas Gajah mada, Indonesia

A) Sources and Products: Japanese Diet

PA0401 Differences in the amount of functional components in leaf mustard (*Brassica juncea*) cooked by various methods

Chiaki Ishikawa[1], Yusuke Sawai[1], Yoichi Nishiba[1], Naoya Tanahara[2]

[1]Kyushu Okinawa Agric. Res. Cent., NARO, Japan, [2]Okinawa Pref. Agric. Res. Cent., Japan

PA0402 Inhibition of the DNA polymerase activities of HIV-1 reverse transcriptase and HIV-1 replication by *Brasenia schreberi* (Junsai)

Keiko Ishizuka[1], Yuto Tsutsumi[1], Misato Baba[1], Kosaku Nishimura[1,2], Keishi Hata[3], Saori Takahashi[3], Shozo Sakuda[4], Teisuke Takita[1], Kenji Kojima[1], Kiyoshi Yasukawa[1]

[1]Div. of Food Sci. and Biotechnol., Grad. Sch. of Agric., Kyoto Univ., Japan, [2]Toyo Inst. of Food Technol., Japan, [3]Akita Res. Inst. of Food and Brewing,, Japan, [4]Grad. Sch. of Sci. and Eng., Teikyo Univ., Japan

PA0403 The effect of cooking of onion (*Allium cepa L.*) on functional ingredient levels in mice

Jiaqing Xu, Tsuyoshi Tsuduki

Grad. Sch. of Agric. Sci., Tohoku Univ., Japan

PA0404 Development of functional seasonings using the perilla squeezed seeds

Takahiro Kashima[1], Eri Mizutani[1], Hisashi Suzuki[1], Hisae Mizuguchi[2], Tatsuo Shibata[2]

[1]Gifu Pref. Res. Inst. for Food Sci., Japan, [2]Koji-ya Shibata Haruji Shoten Co.Ltd., Japan

PA0405 Evaluation of postprandial glycemic response and physical properties of high-amylose rice "Koshinokaori" cooked by pressure cooker

Tomoko Yamaguchi[1], Masumi Kobayashi[1], Makoto Mizutani[1], Shinobu Fujimura[2], Yasuaki Enoki[3]

[1]Fac. of Education, Niigata Univ., Japan, [2]Fac. of Agric., Niigata Univ., Japan, [3]Bourbon Institutes of Health, BOURBON Co., Japan

PA0406 Difference in antioxidant capacity of rice extracts among rice categories and degree of milling and processing

Hongyan Wu, Miho Hirooka, Toshiyuki Nakamura, Shintaro Munemasa, Yoshiyuki Murata, Yoshimasa Nakamura

Grad. Sch. of Environ. Life Sci., Okayama Univ., Japan

PA0407 Isolation, identification and biological activity of lignans from Japanese apricot

Yuriko Ueda[1], Yoshiharu Okuno[1], Shiho Maehara[1], Hisae Nishiyama[1], Ryohei Kono[2], Sachiko Nomura[2], Hirotoshi Utsunomiya[2]

[1]Dept. of Appl. Chem. and Biochem., Natl. Inst. of Technol., Wakayama Coll., Japan, [2]Dept. of Strategic Surveillance for Functional Food and Comprehensive Traditional Med., Wakayama Med. Univ., Japan

PA0408 Comprehensive dipeptide analysis in Japanese sake by LC-MS/MS

Ushio Takeda[1], Akiyoshi Hirayama[2]

[1]SCIEX, Japan, [2]Inst. for Advanced Biosci., Keio Univ., Japan

A) Sources and Products: Marine Products

PA0501 Studies on novel bioactivity of Kombu (*Laminaria japonica*)

Ichiro Shirasugi[1], Dempo Keiji[1], Yoichi Sakakibara[2], Masahito Suiko[2]

[1]Kurakon Foods Co. Ltd., Japan, [2]Dept. of Biochem. and Appl. Biosci., Univ. of Miyazaki, Japan

PA0502 Characteristic of yellowfin tuna skin (*T. albacares*) gelatin enriched with cinnamon and roselle powder

Andriati Ningrum[1], Martina Widhi Hapsari[1], Heli Siti Halimatul Munawaroh[2]

[1]Dept. of Food Sci. and Agric. Product Technol., Fac. of Agric. Technol., Gadjah Mada Univ., Indonesia, [2]Dept. of Chem., Fac. of Mathematics and Sci., Indonesia Univ. of Education, Indonesia

PA0503 Protein hydrolysates and peptides from Atlantic sea cucumber (*Cucumaria frondosa*): Antioxidant potential in food and biological systems

Tharindu R.L. Senadheera[1], Deepika Dave[1,2], Fereidoon Shahidi[1]

[1]Dept. of Biochem., Memorial Uni. of Newfoundland, Canada, [2]Fisheries and Marine Inst. of Memorial Uni. of Newfoundland, Canada

PA0504 Chlorophyll C2 uptake by Caco-2 Cells through modulation of the human ATP-binding cassette transporter family

Eko Susanto[1,2], Fumiaki Beppu[1], Masashi Hosokawa[1], Kazuo Miyashita[1]

[1]Dept. of Marine Bioresour. Chem., Grad. Sch. of Fish. Sci., Hokkaido Univ., Japan, [2]Dept. Fish. Prod. Tech., Fac. Fish. and Marine Sci., Diponegoro Univ., Indonesia

PA0505 Brown alga extract reduces harmful components from particular matters through expression of aldehyde dehydrogenases in respiratory cells

Sang Min Cho[1], Ju-Young Ko[2], Min-Gyun Kim[1], Ji-Hyeok Lee[1], Kkonnip Son

[1]Inst. for Lee Gil Ya Cancer and Diabetes., Gachon Univ., Korea, [2]Dept. of Marine Life Sci., Jeju Natl. Univ., Korea

PA0506 *Sargassum thunbergii* alga reduces harmful components from particular matters via expression of aldehyde dehydrogenases in keratinocytes

Ju-Young Ko[1], Sang Min Cho[2], Min-Gyun Kim[2], Ji-Hyeok Lee[2]

[1]Dept. of Marine Life Sci., Jeju Natl. Univ., Korea, [2]Inst. for Lee Gil Ya Cancer and Diabetes., Gachon Univ., Korea

PA0507 Effects of brief bittern water treatment on *Streptococcus mutans* growth and biofilm formation

David Pei-Cheng Lin[1], Tung-Yu Lin[1], Han-Hsin Chang[2]

[1]Dept. of Med. Lab. and Biotechnol., Chung Shan Med. Univ., Taiwan, [2]Dept. of Nutr., Chung Shan Med. Univ., Taiwan

PA0508 *Caulerpa lentillifera* extract, a functional ingredient and its antioxidant effect

Doungporn Amornlerdpison[1,2], Kriangsak Mengumphan[1,2]

[1]Fac. Fish. Tech., Maejo. Univ., Thailand, [2]EC. Agri. Inno. for Grad. Entrepreneur., Maejo. Univ., Thailand

PA0509 Value added of *Caulerpa lentillifera* as antioxidant and anti-diabetic agents

Sittikorn Yoojam[1], Narissara Lailerd[2], kriangsak Mengumphan[1,3], Doungporn Amornlerdpison[1,3]

[1]Fac. Fish. Tech., Maejo. Univ., Thailand, [2]Dept. Physiol. Med. CMU., Thailand, [3]EC. Agri. Inno. for Grad. Entrepreneur., Maejo. Univ., Thailand

A) Sources and Products: Soy and Legumes

PA0601 A study on the physiological function of manninotriose, an important oligosaccharide in fermented soybean product

Misaki Yamada[1], Chiaki Ishikawa[1,2], Yasujiro Morimitsu[1]

[1]Dept. of Nutr. and Food Sci., Ochanomizu Univ., Japan, [2]Kyushu Okinawa Agric. Res. Cent., NARO, Japan

PA0602 Effect of germination under salinity condition on phenolic content and antioxidant capacity of selected legumes

Supap Nontasan[1,2], Pheeraya Chottanom[1], Anuchita Moongngarm[1,2]

[1]Dept. of Food Tech. and Nutr., Fac. of Tech., Mahasarakham Univ., Thailand, [2]Res. Unit of Nutr. and Health, Fac. of Tech., Mahasarakham Univ., Thailand

PA0603 Improvement of freeze-thaw stability of oil-in-water emulsions prepared with modified soy protein isolates

Xiaodan Zang[1,3], Chonghui Yue[1], Mujun Liu[1], Huanyu Zheng[2], Xiufang Xia[1], Guoping Yu[1]

[1]Coll. of Food Sci., Northeast Agri. Univ., China, [2]Heilongjiang Green Food Sci. Res. Inst., China, [3]Experimental Cent, Heilongjiang Agri. Economy Vocational Coll., China

PA0604 Effects of black soybean seed coat extracts on blood lipid levels in ApoE deficient mice

Wataru Tanaka[1], Hiroki Matsuyama[1], Daigo Yokoyama[1], Yoko Yamashita[2], Hitoshi Ashida[2], Masanobu Sakono[1], Hiroyuki Sakakibara[1]

[1]Grad. Sch. of Agric., Univ. of Miyazaki., Japan, [2]Grad. Sch. of Agric. Sci., Kobe Univ., Japan

PA0605 Effects of *S*-equol on pancreatic β-cell function as incretin mimetics

Naoki Harada[1], Hiroko Horiuchi[1], Hiroshi Inui[2], Ryoichi Yamaji[1]

[1]Div. Appl. Life Sci., Grad. Sch. Life Environ. Sci., Osaka Pref. Univ., Japan, [2]Dept. Nutr., Col. Health Hum. Sci., Osaka Pref. Univ., Japan

A) Sources and Products: Tea, Coffee and Cocoa

PA0701 Coffee consumption and psychological mood: the Korea nurses' health study

Hea Young Lee[1], Oksoo Kim[2], Jung Eun Lee[3], Yanghee Pang[2]

[1]Dept. of Nursing, Doowon Tech. Univ., Korea, [2]Coll. of Nursing, Ewha Womans Univ., Korea, [3]Dept. of Food and Nutr., Seoul Natl. Univ., Korea

PA0702 Preparation and characterization of coffee extract-loaded chitosan-tripolyphosphate nanoparticles with addition of surfactant Tween 80

Puspita Sari[1], Kristina Lois[1], Hilda[1], Kun Tanti Dewandari[2], Maria Belgis[1], Mahriani[3]

[1]Dept. of Agric. Product Technol., Fac. of Agric. Technol., Univ. of Jember, Indonesia, [2]Dept. of Agric. Postharvest Res. and Dev., Ministry of Agric., Indonesia, [3]Dept. of Biol., Fac. of Math. and Nat. Sci., Univ. of Jember, Indonesia

PA0703 Protective effects of tea seed oil from *Camellia tenuifolia* on di-(2-ethylhexyl) phthalate-induced locomotive defects in *Caenorhabditis elegans*

Chia-Cheng Wei[1,2], Shang-Wei Li[2], Vivian Hsiu-Chuan Liao[2]

[1]Inst. of Food Safety and Health, Natl. Taiwan Univ., Taiwan, [2]Dept. of Bioenviron. Systems Eng., Natl. Taiwan Univ., Taiwan

PA0704 Development of lower caffeine content processing in commercialization Oolong tea

Wen-Chang Chang, Bi-Heng Wang, Yan-Cheng Lin, Chih Y. Lo

Dept. of Food Sci., Natl. Chiayi Univ., Taiwan

PA0705 Rooibos extract, containing eriodictyol-6-C-β-D-glucoside as the active component, stimulate the M_3 muscarinic acetylcholine receptor

Takao Iwai[1], Saori Nishimachi[1], Noriyuki Monoi[1], Megumi Aono[1], Seiji Nakamura[2]

[1]Res. and Dev. Hdqrs., Lion Corp., Japan, [2]Div. of Maxillofac. Diag. and Surg. Sci., Fac. of Dent. Sci., Kyushu Univ., Japan

PA0706 Comparative study of bioactive compounds and antioxidant activities between Japanese green tea and roasted green tea infusion during *in vitro* gastrointestinal digestion

Wei Qin, Sunantha Ketnawa, Yukiharu Ogawa

Grad. Sch. of Hortic., Chiba Univ., Japan

PA0707 Theaflavin induces browning in inguinal white adipose tissue

Nayuta Hirashima[1], Kenta Suzuki[1], Ryo Sukegawa[1], Yasuyuki Fujii[1], Ayaka Yamamoto[2], Tomoya Ueno[2], Naomi Osakabe[1]

[1]Dept. of Bio-science and Eng., Shibaura Inst. of Technol., Japan, [2]R&D Div., Yaizu Suisankagaku Ind. Co., Ltd., Japan

PA0708 Novel honey from tea flower (*Camellia sinensis*) as a functional food

Kieko Saito[1,2], Yoriyuki Nakamura[2]

[1]Sch. of Food and Nutr. Sci., Univ. of Shizuoka, Japan, [2]Tea Sci. Cent., Univ. of Shizuoka, Japan

PA0709 Profile of bioactive compounds and antioxidant capacity of indonesian cocoa powder: A case of food processing authentication

Besty R Ulvia[1], Nuri Andarwulan[1,2], Dase Hunaefi[1]

[1]Food Sci. and Technol., Dept., Fac. of Agric. Eng. and Technol., IPB Univ., Indonesia, [2]SEAFAST Cent., IPB Univ., Indonesia

PA0710 Tea consumption attenuate macrophagic foam cell formation through inhibition of the α9-nicotinic-acetylcholine receptor expression in monocytes

Yuan-Soon Ho[1], Li-Ching Chen[1], Chi-Tang Ho[2]

[1]Sch. of Med. Technol., Taipei Med. Univ., Taiwan, [2]Rutgers Univ., USA

PA0711 Bioactive incidental food nanoparticles in black tea infusion exhibiting elevated antioxidant activity

Lijing Ke, Huan Han, Guanzhen Gao, Jianwu Zhou, Pingfan Rao

Food Nutr. Sci. Centre, Sch. of Food Sci. and Biotech., Zhejiang Gongshang Univ., China

PA0712 Effects of polysaccharides and polyphenolics fractions of Zijuan tea (*Camellia sinensis* var. kitamura) on a-glucose activity and blood glucose level and glucose tolerance of hyperglycaemic mice

Dejing Chen[1], Jingyuan Sun[1], Weixue Dong[1], Zhiming Xu[2]

[1]Bio-resources Key Lab. of Shaanxi Province, Sch. of Biol. Sci. and Eng., Shaanxi Univ. of Technol., China, [2]Natl. Eng. Res. Cent. for Seafood, Sch. of Food Sci. and Technol., Dalian Polytechnic Univ., China

A) Sources and Products: Others

PA0801 The physical properties of cooking rice

Yukiko Kagohashi, Anon Tanaka, Shiho Takahashi

Dept. of Health and Dis., The Univ. of Shimane, Japan

PA0802 Effect of glycosylation on the functional properties and conformational characteristics of oat proteins

Hailing Wang[1,2], Benyang Wu[1,2], Yuande Shi[1], Pingping Su[1], Sheng Chen[1], Shaoyun Wang[3], Leiwen Xiang

[1]Fuqing Branch, Fujian Normal Univ., China, [2]Coll. of Life Sci., Fujian Normal Univ., China, [3]Coll. of Biosci. and Biotechnol., Fuzhou Univ., China

PA0803 Comparison of protein and bioactive compounds in different germinated rice cultivars

Tanongsak Moontree, Anuchita Moongngarm

Dept. of Food Tech and Nutr. Fac. of Tech, Mahasarakham Univ., Thailand

PA0804 Antioxidant activity, glycemic response and acceptance of novel tea based isotonic sport beverages

Anoma Chandrasekara[1], Shanika Schtharani[2], Isuru Wijesekara[2], Anudini Liyanage[3], Indika Palangasinghe[3], Jaanaki Goonaratne[4]

[1]Dept. of Appl. Nutr., Wayamba Univ. of Sri Lanka, Sri Lanka, [2]Dept. of Food Sci. and Technol. Univ. of Sri Jayewardenepura, Sri Lanka, [3]Dilmah Ceylon Tea Company (PLC), Sri Lanka, [4]DPO Lanka (Private) Limited, Sri Lanka

PA0805 Hydrophobic solvent extraction of glycyrrhetinic acid from dried licorice root involved with size distribution and part of licorice root in sample

Kouhei Wada, Masanao Imai

Course of Bioresour. Utilization Sci., Grad. Sch. of Bioresour. Sci., Nihon Univ., Japan

PA0806 May phytochemical rich chokeberry pomace extract mitigate health hazards of processed meat?

Laura Tamkutė[1], Gintar Milašiūtė[2], Ieva Sarapinienė[2], Vytenis Arvydas Skeberdis[2], Milda Pukalskienė[1], Petras R. Venskutonis[1]

[1]Dept. of Food Sci. and Technol., Kaunas Univ. of Technol., Lithuania, [2]Inst. of Cardiol., Lithuanian Univ. of Health Sci., Lithuania

PA0807 The functional characteristics of coix seed ingredients

Jianjun Cheng, Gaopeng Zhang, Chunlei Ni, Yangyue Ding

Coll. of Food Sci., Northeast Agric. Univ., China

PA0808 Diet of anaogue rice increase insulin serum and *TCF7L2* gene expression on rat model of type 2 diabetes mellitus

Rumiyati[1], Rizqa Salsabila Firdausia[1], Gravinda Widyaswara[2], Agung Endro Nugroho[1], Yekti Asih Purwestri[2], Yudi Pranoto[3], Sri Widyastuti[4], Satrijo Saloko[4], Muktasam[5]

[1]Fac. of Pharm., Universitas Gadjah Mada, Indonesia, [2]Fac. of Biol., Universitas Gadjah Mada, Indonesia, [3]Fac. of Food and Agric. Product Technol., Universitas Gadjah Mada, Indonesia, [4]Fac. of Food Technol. and Agroindustry, Universitas Mataram, Indonesia, [5]Dept. of Sosio Economic, Fac. of Agric., Universitas Mataram, Indonesia

PA0809 Changes in imidazole dipeptide content of chicken meat after domestic cooking and during food manufacturing process

Kiyoko Nagahama[1], Sayaka Nishimoto[2], Katsuhisa Kurogi[1,2], Hidemi Hattori[1,2], Yoichi Sakakibara[1,2]

[1]Interdiscip. Grad. Sch. of Agric. and Eng., Univ. of Miyazaki, Japan, [2]Dept. of Biochem. and Appl. Biosci., Fac. of Agric., Univ. of Miyazaki, Japan

PA0810 Effects of organic soil remedying fertilizer RA-I on food plants' potentials as functional food sources in Indonesia

Indah Epriliati[1,2], Indah Kuswardani[1,2], Clara Christina[3], Yohanes Harimurti[4], Haryono[5], Thomas IP Suseno[1]

[1]Dept. of Food Technol., Fac. of Agric. Technol., Widya Mandala Surabaya Catholic Univ., Indonesia, [2]Food Nutr. Res. Cent., Widya Mandala Surabaya Catholic Univ., Indonesia, [3]CV Panca Kana Mustika Jati,, Indonesia, [4]Dept. of Finance, Fac. of Business, Widya Mandala Surabaya Catholic Univ., Indonesia, [5]Dept. of Economics, Grad. Sch. of Economics, Bhayangkara Surabaya Univ., Indonesia

PA0811 Evaluation of phenolic and flavonoid contents in young rice leaves (RD6)

Natthida Weerapreeyakul[1,2], Kawintra Tamprasit[2], Khaetthareeya Sutthanut[1,2], Wipawee Thukhammee[2,3], Jintanaporn Wattanathorn[2,3]

[1]Div. of Pharm. Chem., Fac. of Pharm. Sci., Khon Kaen Univ., Thailand, [2]Human High Performance and Health Promotion (HHP&HP) Res. Inst., Khon Kaen Univ., Thailand, [3]Dept. of Physiol., Fac. of Med., Khon Kaen Univ., Thailand

PA0812 Assessement of bread crust melanoidins isolated by different ultrafiltration membranes

Gonzalo Salazar-Mardones, M. Dolores Rivero-Pérez, Mónica Cavia-Saiz, M Luisa González-SanJose, Pilar Muñiz

Dpet. and Food Sci., Universidad de Burgos, Spain

PA0813 Implementing food based dietary guidelines; field experience in Maldives

Roshan Delabandara[1], Visakha Thilekeratne[1], Anoma Chandrasekara[1,2]

[1]Nutr. Soc. of Sri Lanka, Sri Lanka, [2]Wayamba Univ. of Sri Lanka, Sri Lanka

PA0814 Cordycepin-induced unfolded protein response-dependent cell death, and AKT/MAPK-mediated drug resistance in mouse testicular tumor cells

Ming-Min Chang, Bo-Syong Pan, Bu-Miin Huang

Dept. of Cell Biol. and Anatomy, Coll. of Med., Natl. Cheng Kung Univ., Taiwan

PA0815 Harvesting bioactive colloidal nanoparticles in soup made from freshwater clams *(Corbicula fluminea Muller)*

Guanzhen Gao[1,3], Lijing Ke[1], Huiqin Wang[1], Jianwu Zhou[1], Jingjen Lin[2], Bonnie Sun Pan[2], Pingfan Rao[1], Toshiro Matsui[3]

[1]Food Nutr. Sci. Centre, Sch. of Food Sci. and Biotech., Zhejiang Gongshang Univ., China, [2]Dept. of Food Sci., Natl. Taiwan Ocean Univ., Taiwan, [3]Dept. of Biosci. and Biotechnol., Fac. of Agric., Grad. Sch. of Kyushu Univ., Japan

PA0816 Fermentation characteristics of Cheonggukjang (*Bacillus* fermented soybean fermented products) by various *Bacillus subtilis* isolates

Hee-Jong Yang[1], Kenji Sato[2], Myeong Seon Ryu[1], Su-Ji Jeong[1], Jiwon Seo[1], Do-Youn Jeong[1], Dong-Hwa Shin[3]

[1]Microbial Inst. for Fermentation Ind. (MIFI), Korea, [2]Div. of Appl. Biosci., Grad. Sch. of Agric., Kyoto Univ., Japan, [3]Chonbuk Natl. Univ., Korea

PA0817 Effects of dehulled adlay instant product by extrusion on blood lipids in dyslipidemic subjects

Chieh Chung, Shu-Chen Hsieh

Inst. of Food Sci. and Technol., Natl. Taiwan Univ., Taiwan

PA0818 Evaluation of functional components in golden pickled cabbage during storage

Chieh-Yin Su, Tsai-Hua Kao

Dept. of Food Sci., Fu Jen Catholic Univ., Taiwan

B) Food Factors: Amino Acids

PB0101 L-lysine supplementation suppressed DPPIV and neprilysin expressions in the liver and kidney and increased circulating pancreatic polypeptide in rats

Chao-Wu Xiao, Amy Hendry, Jesse Bertinato

Nutr. Res. Div., Bureau of Nutr. Sci., Food Directorate, Health Products and Food Branch, Health Canada, Canada

PB0102 Taurine regulates immune-related gene expression in macrophage-like cells

Midori Fukumura[1], Kenji Watari[1], Hideo Satsu[2]

[1]Dept. of Biotech., Grad. Sch. of Eng., Maebashi Inst. Technol., Japan, [2]Dept. of Biotech., Maebashi Inst. Technol., Japan

PB0103 Effects of long-term dietary methionine restriction on bone turnover in high-fat-fed mice

Changxing Feng[2], Haitao Guo[2], Yanan Wang[2], Jiahong Zhang[2], Yonghui Shi[2], Guowei Le[1,2]

[1]State Key Lab. of Food Sci. and Technol., China, [2]Sch. of Sci. and Technol., Jiangnan Univ., China Jiangnan Univ., China

PB0104 The mechanism of FGF21-induced suppression of liver lipid accumulation during protein malnutrition

Hiroki Kosaka[1], Yori Ozaki-Masuzawa[2], Rino Abiru[2], Keigo Kawate[2], Yuki Kohno[2], Atsushi Miura[1,2], Morichika Konishi[3], Nobuyuki Itoh[4], Asako Takenaka[5], Takashi Hosono[1,2], Taiichiro Seki[1,2]

[1]Dept. of Appl. Life Sci., Grad. Sch. of Bioresour. Sci., Nihon Univ., Japan, [2]Dept. of Chem. and Life Sci., Coll. of Bioresour. Sci., Nihon Univ., Japan, [3]Lab. of Microbial Chem., Kobe Pharm. Univ., Japan, [4]Dept. of Genetic Biochem., Kyoto Univ. Grad. Sch. of Pharm. Sci., Japan, [5]Dept. Agric. Chem., Sch. of Agric., Meiji Univ., Japan

PB0105 γ-Aminobutyric acid induces biosynthesis of a novel imidazole peptide in skeletal muscle

Kanako Sato[1], Takeshi Arima[2], Takumi Komaru[3], Noriyuki Yanaka[1], Mikako Sato[4], Yasuyuki Oishi[4], Thanachaporn Kumrungsee[1]

[1]Grad. Sch. of Integ. Sci. for Life, Hiroshima Univ., Japan, [2]Grad. Sch. of Biosphere Sci., Hiroshima Univ., Japan, [3]Sch. of Appl. Biosci., Hiroshima Univ., Japan, [4]R&D Cent., NH Foods Ltd., Japan

PB0106 Absorption and distribution and biological function of D-proline on mice

Aoi Miyazaki, Kenji Sato

Div. of Appl. Biosci., Grad. Sch. of Agric., Kyoto Univ., Japan

PB0107 Effects of dietary methionine restriction on cardiac function in elderly mice

Le Han[1,2], Guoqing Wu[2], Yuncong Xu[2], Yuge Jiang[2], Bowen Li[2], Yonghui Shi[2], Guowei Le[1,2]

[1]The State Key Lab. of Food Sci.and Technol., Jiangnan Univ., China, [2]Cent. for Food Nutr. and Functional Eng., Sch. of Food Sci. and Technol., Jiangnan Univ., China

PB0108 Inhibitory effect of taurine on fatty acid/triglyceride synthesis in hypertriglyceride HepG2 cells

Wen Chen[1,2], Yuxun Ma[1], Qi Song[1]

[1]Beijing Key Lab. of Bioactive Substances and Functional Foods, Beijing Union Univ., China, [2]Dept. of Food Sci, Coll. of Biochem Eng., Beijing Union Univ., China

PB0109 Effects of roasting method on nutritional properties of sweet potato

Ayano Furutani[1], Wataru Tanaka[2], Hiroki Matsuyama[2], Hayato Tajiri[1], Masakatsu Takashima[1], Rio Uragami[1], Masanobu Sakono[1,2], Hiroyuki Sakakibara[1,2]

[1]Fac. of Agric., Univ. of Miyazaki, Japan, [2]Grad. Sch. of Agric., Univ. of Miyazaki, Japan

B) Food Factors: Carbohydrates

PB0201 Protein expression and growth medium optimization for the overexpression of a heat-stable amylosucrase in a *Bacillus* host system

Sunkyung Ko[1], Young-Wan Kim[2], Sang-Ho Yoo[1]

[1]Dept. of Food Sci. and Biotechnol. and Carbohydr. Bioprod. Res. Cent., Sejong Univ., Korea, [2]Dept. of Food and Biotechnol., Korea Univ., Korea

PB0202 *In vitro* digestibility of hyper-branched glucan particles produced by various branching enzymes

Jaehoon Bae, Sang-Ho Yoo

Dept. of Food Sci. and Biotechnol. and Carbohydr. Bioprod. Res. Cent., Sejong Univ., Korea

PB0203 Enzymatically synthesized glycogen inhibits allergic responses in basophilic and mast cells

Yasukiyo Yoshioka[1], Masako Inoue[2], Takashi Furuyashiki[3], Hitoshi Ashida[2]

[1]Fac. of Clin. Nutr. Diet., Konan Women's Univ., Japan, [2]Grad. Sch. of Agric. Sci., Kobe Univ., Japan, [3]Inst. of Health Sci., Ezaki Glico Co., Ltd, Japan

PB0204 Enzymatically synthesized glycogen prevents UVB damage in normal human epidermal keratinocytes

Yasukiyo Yoshioka[1], Tomoya Kitakaze[2], Takakazu Mitani[2], Takashi Furuyashiki[3], Hitoshi Ashida[2]

[1]Fac. of Clin. Nutr. Diet., Konan Women's Univ., Japan, [2]Grad. Sch. of Agric. Sci., Kobe Univ., Japan, [3]Inst. of Health Sci., Ezaki Glico Co., Ltd, Japan

PB0205 Effects of increasing dietary intake of high amylose wheat on gastrointestinal health in lean male and female mice

See Meng Lim[1,3,4], Amanda Page[2,3], Hui Li[2,3], Rebecca O'Rielly[2,3], John Carragher[1], Iain Searle[1], Sarah Robertson[2], Beverly Muhlhausler[1,3,5]

[1]Fac. of Sci., The Univ. of Adelaide, Australia, [2]Fac. of Health and Med. Sci., The Univ. of Adelaide, Australia, [3]South Australian Health and Med. Res. Inst., Australia, [4]Cent. for Community Health, Fac. of Health Sci., Universiti Kebangsaan Malaysia, Malaysia, [5]Commonwealth Sci. and Ind. Res. Organisation, Australia

PB0206 Neural regulation of plasma adipokine levels in rats fed excessive fructose

Naoto Hashimoto, Manabu Wakagi, Katsunari Ippoushi, Yuko Takano-Ishikawa

Div. of Food Function, Food Res. Inst., NARO, Japan

PB0207 Enhanced stability and bioactivity of curcumin by encapsulation in phytoglycogen nanoparticles

Jinling Fan, Xingman Han, Pan Wang

Dept. of Foodsci., Sch. of Food and Bioeng., Henan Univ. of Sci. and Tech., China

PB0208 Dietary cellulose nanofiber modulates obesity and gut microbiota in high-fat-fed mice

Takao Nagano[1], Hiromi Yano[2]

[1]Dept. of Food Sci., Fac. of Biores. and Envir. Sci., Ishikawa Pref. Univ., Japan, [2]Dept. of Health Sports Sci., Kawasaki Univ. of Med. Wel., Japan

PB0209 Application potential of konjac oligosaccharide in functional foods for people with irregular and long time work

Yan Zeng, Chaoyu Tian, Tong Zhang, Xuerong Xing, Yueming Zhu

Tianjin Inst. of Industrial Biotechnol., Chinese Academy of Sci., China

PB0211 Effects of paramylon from *Euglena gracilis* on gastric stress ulcer in rats

Misa Ogushi[1,2], Naoki Harada[1], Momoko Imai[3], Minako Yoshizawa[4], Kengo Suzuki[5], Yoshihisa Nakano[1]

[1]Dept. Life Environ. Sci., Osaka Pref. Univ., Japan, [2]Dept. Food Nutr., Hagoromo Univ., Japan, [3]Dev. Clin. Nutr., Osaka Pref. Univ., Japan, [4]Dept. Health Nutr., Otemae Univ., Japan, [5]Euglena Co., Ltd., Japan

B) Food Factors: Carotenoids

PB0301 Bioactivities and intestinal absorption of halocynthiaxanthin, a carotenoid from sea squirts

Chiaki Ikeda[1], Yuki Manabe[1], Nami Tomonaga[1], Takashi Maoka[1,2], Tatsuya Sugawara[1]

[1]Div. of Appl. Biosci., Grad. Sch. of Agric., Kyoto Univ., Japan, [2]Div. of Food Funct. and Chem., Res. Inst. for Prod. Dev., Japan

PB0302 Characterization and stability of *9Z*-β-carotene high-loaded nanostructured lipid carriers with higher bioaccessibility

Cheng Yang[1,2], Xin Jiang[1,2], Hongxiao Yan[1,2], Qingrui Sun[3], Huaneng Xu[1,2], Rong Tsao[4], Lianfu Zhang[1,2]

[1]State Key Lab. of Food Sci. & Tech., Jiangnan Univ., China, [2]Sch. of Food Sci. and Tech., Jiangnan Univ., China, [3]Coll. of Food Sci., Heilongjiang Bayi Agri. Univ., China, [4]Guelph Res. and Dev. Centre, Agric. and Agri-Food Canada, Canada

PB0303 Cognitive function improvement with astaxanthin and tocotrienols intake –A randomized, double-blind, placebo-controlled study–

Yuki Kizawa[1], Takahiro Sekikawa[1], Yanmei Li[2], Tsuyoshi Takara[3]

[1]BGG Japan Co., Ltd., Japan, [2]Beijing Gingko-Group Biol. Technol. Co., Ltd., China, [3]Med. Co. Seishinkai, Japan

B) Food Factors: Lipids

PB0401 Precise analysis of plant sterols in human blood and search for factors related to its concentration

Eriko Nakatsukasa, Tsuyoshi Tsuduki

Grad. Sch. of Agric., Tohoku Univ., Japan

PB0402 Effect of salt on the lipid absorption capacity

Nao Hayashi, Tsuduki Tsuyoshi

Grad. Sch. of Agric., Tohoku Univ., Japan

PB0403 Allyl isothiocyanate induced lipid composition changes in Tet-regulated TRPA1 expressing HEK293 cells

Akika Nagata, Tsutomu Hashidume, Nanami Senoo, Yuko Terada, Keisuke Ito, Shinji Miura, Noriyuki Miyoshi

Grad. Sch. of Integrated Pharm. and Nutri. Sci., Univ. of Shizuoka, Japan

PB0404 A highly unsaturated diacylglycerol-enriched plastic fat for novel healthier margarine formulations

Ning Zhang[1,2], Zun Liu[1], Zhen Zhang[1,2], Ying Li[1,2], Yong Wang[1,2]

[1]Dept. of Food Sci. and Eng., Coll. of Sci. and Eng., Jinan Univ., China, [2]Guangdong Eng. Technol. Res. Cent. for Oils and Fats Biorefinery, Guangdong Eng. Technol. Res. Cent. for Cereals and Oils Byproducts Biorefinery, China

PB0405 Fundamental study for promoting the utilization of sunflower seed oil and strained lees made in Kagoshima, Japan

Haruna Kawasoe[1], Saki Sato[2], Yuji Minami[1,2], Katsuko Kajiya[1,2]

[1]Grad. Sch. of Agric., Forest. and Fish., Kagoshima Univ., Japan, [2]Fac. of Agric., Kagoshima Univ., Japan

PB0406 Oxyphytosterols generated by ozone reaction with β-sitosterol

Igor Rodrigues Martins[1], Janice Onuki[2], Sayuri Miyamoto[3], Miriam Uemi[1]

[1]Dept. of Chem., Inst. of Environ. Sci., Chem. and Pharm., Fed. Univ. of São Paulo, Brazil, [2]Lab. of Mol. Biol., Butantan Inst., Brazil, [3]Dept. of Bioch., Chem. Inst., São Paulo Univ.São Paulo Univ., Brazil

PB0407 New oxysterol generated by ozone reaction with cholesterol

Igor Rodrigues Martins[1], Larissa Naomi Kanashiro[1], Janice Onuki[2], Miriam Uemi[1]

[1]Dept. of Chem., Inst. of Environ. Sci., Chem. and Pharm., Fed. Univ. of São Paulo., Brazil, [2]Lab. of Mol. Biol., Butantan Inst., Brazil

PB0408 Correlating trans fatty acids and key flavor compounds in youtiao using partial least squares regression analysis

Xuelian Yang[1,2,3], Xiangyu Zhang[3], Jianchun Xie[1,2,3]

[1]Beijing Advanced Innovation Cent. for Food Nutr. and Human Health, China, [2]Beijing Eng. and Technol. Res. Cent. of Food Additives, China, [3]Sch. of Food and Chemical Eng., Beijing Technol. and Business Univ., China

PB0409 The metabolic conversion of alpha-eleostearic acid to conjugated linoleic acid relates to cytochrome P450 enzymes

Qiming Wu, Tsuyoshi Tsuduki

Grad. Sch. of Agric. Sci. Tohoku Univ., Japan

PB0410 Health benefits of olive leaf tea for adults with pre-diabetes: An exploratory randomized controlled trial

Risa Araki[1], Keiko Fujie[1], Nanako Yuine[1,2], Yuta Watabe[1,2], Yoshio Nakata[1], Hiroaki Suzuki[3], Hiroko Isoda[4], Koichi Hashimoto[1]

[1]Dept. of Clin. and Translational Res. Methodol., Univ. of Tsukuba, Japan, [2]Grad. Sch. of Comprehensive Human Sci., Univ. of Tsukuba, Japan, [3]Dept. of Internal Med. (Endocrinol. and Metab.), Univ. of Tsukuba, Japan, [4]Fac. of Life and Environ. Sci., Univ. of Tsukuba, Japan

PB0411 A new method applied in the analysis of volatile compounds of rapeseed oils: monolithic material sorptive extraction

Qi Zhou, Xiao Jia, Yini Yang

Oil Crops Res. Inst. of the Chinese Academy of Agric. Sci., China

PB0412 Digestion of dietary phospholipids and the physiological role of the digestive products in the intestine

Kaeko Murota[1,2], Shun Kumamoto[2], Akane Hirano[2], Nobuyuki Fukushima[2], Takeshi Ohkubo[3], Akira Tokumura[4]

[1]Dept. of Life Sci., Fac. of Life Environ. Sci., Shimane Univ., Japan, [2]Dept. of Life Sci., Fac. of Sci. Eng., Kindai Univ., Japan, [3]Dept. of Health Nutr., Fac. of Human Sci., Sendai Shirayuri Women's Coll., Japan, [4]Dept. of Pharm., Fac. of Pharm., Yasuda Women's Univ., Japan

PB0413 Analysis of high-fat-diet-induced aggravation in postprandial lipidemia through saturated fatty acid-induced inflammation in the intestine

Hiroyuki Tsuyama[1], Mayu Kikuchi[1], Manae Matsuda[1], Miori Morikawa[1], Rie Katsumata-Tsuboi[1], Miori Tanaka[1], Hirofumi Inoue[1], Tsuyoshi Goto[2], Teruo Kawada[2], Kaeko Murota[3], Mariko Uehara[1], Noubyuki Takahashi[1]

[1]Grad. Sch. of Agric., Tokyo Univ. of Agric., Japan, [2]Grad. Sch. of Agric., Kyoto Univ., Japan, [3]Grad. Sch. of Agric., Shimane Univ., Japan

PB0414 The effect of fatty acids on the oxidative stress exposure in vascular endothelial cells

Fumika Nakano, Tsuyoshi Tsuduki

Grad. Sch. of Agric. Sci., Tohoku Univ., Japan

PB0415 Effect of eicosapentaenoic-enriched phospholipids on basal and pro-inflammatory cytokines-induced lipolysis in 3T3-L1 adipocytes

Lei Du[1], Yuhong Yang[2], Koretaro Takahashi[3]

[1]Dept. of Nutr. and Food Hyg., Sch. of Public Health, Shandong Univ., China, [2]Sch. of Food Sci. and Eng., Qilu Univ. of Technol., China, [3]Fac. of Eng., Kitami Inst. of Technol., Japan

PB0416 Improved bioaccessibility and hydrolysis of lipid emulsions in crowded medium

Zhongxiu Chen

Mol. Food Sci. Lab., Coll. of Food and Biol. Eng., Zhejiang Gongshang Univ., China

PB0417 Omega 9-enriched crocodile oil and its insulin sensitivity

Metas Ngernjan[1], Narissara Lailerd[2], Kriangsak Mengumphan[1,3], Doungporn Amornlerdpison[1,3]

[1]Fac. Fish. Tech., Maejo. Univ., Thailand, [2]EC. Agri. Inno. for Grad. Entrepreneur., Maejo. Univ., Thailand, [3]Dep. Physiol. Med. CMU., Thailand

PB0418 Freshwater fish oil from catfish on anti-hyperglycemic and anti-hyperlipidemic effects in obese rats

Kriangsak Mengumphan[1,2], Supaporn Sattang[1], Narissara Lailerd[3], Doungporn Amornlerdpison[1,2]

[1]Fac. Fish. Tech. Maejo Univ., Thailand, [2]EC. Agri. Inno. for Grad. Entrepreneur., Maejo. Univ., Thailand, [3]Fac. Physiol. Med. CMU., Thailand

B) Food Factors: Minerals

PB0501 A solubility-based separation of group B soyasaponins with zinc transporter protein (ZIP4)-enhancement activity from whole soybean flour

Masakazu Takahashi[1], Keitaro Kaneda[1], Fuka Okawa[1], Haruna Yamauchi[1], Taiho Kambe[2], Hajime Katano[1]

[1]Dept. of Biosci., Fukui Pref. Univ., Japan, [2]Div. of Int. Life Sci., Grad. Sch. of Biostudies, Kyoto Univ., Japan

PB0502 Analysis of ESR spectra in different parts of mushrooms and their hydroxyl radical scavenging activities

Tomomi Kanno[1], Shigeaki Nakazawa[2], Etsuko Harada[3], Hiroki Okumura[4], Yoshiaki Miyake[1], Kazunobu Sato[2], Takeji Takui[2], Toshihiko Osawa[5]

[1]Dept. of Health and Nutr. Sci., Fac. of Health and Med. Sci., Aichi Shukutoku Univ., Japan, [2]Dept. of Chem. and Mol. Materials Sci., Grad. Sch. of Sci., Osaka City Univ., Japan, [3]Dept. of Forest and Envir. Sci., Fac. of Agric., Miyazaki Univ., Japan, [4]Dept. of Life Sci., Grad. Sch. of Agric., Meijo Univ., Japan, [5]Dept of Health and Nutr., Fac. of Psych. and Phys. Sci., Aichi Gakuin Univ., Japan

PB0503 Effect of soluble dietary fiber on plasma phosphorus and endothelial function

Sarasa Tanaka[1,2], Mariko Tani[1], Hiromi Kawamura[1], Shiori Sakaue[2], Mayu Matsui[2], Midori Ishitani[1], Motoyoshi Sakaue[1,2], Mikiko Ito[1,2]

[1]Grad Sch. of Human Sci. and Environ., Univ. of Hyogo, Japan, [2]Sch. of Human Sci. and Environ., Univ. of Hyogo, Japan

B) Food Factors: Peptides and Proteins

PB0601 Comparative experiments of fibril formation from whey protein concentrate with homogeneous and secondary nuclei

Hong-Hua Xu, Mei-Li Shao, Fei Teng, Jun-Yan Tan, Guo-Ping Yu, Xiu-Ling Zhang

Key Lab. of Dairy Sci., Ministry of Education, Northeast Agric. Univ., China

PB0602 Nutritional constituents of spirulina *(Arthrospira platensis)* and the nitrogen balance in spirulina-fed rat

Yudai Shioji[1,2], Takuya Yoshida[2], Tatsuya Sasada[1], Noriyuki Miyoshi[2]

[1]Kakegawa Biocenter of VUTEQ Co., Japan, [2]Grad. Sch. of Integrated Pharm. and Nutr. Sci., Univ. of Shizuoka, Japan

PB0603 Purification of a novel anti-angiotensin converting enzyme inhibitory peptides from neutrase hydrolysate of flounder fish muscle

Ju-Young Ko[1], Ji-Hyeok Lee[2]

[1]Dept. of Marine Life Sci., Jeju Natl. Univ., Korea, [2]Inst. for Lee Gil Ya Cancer and Diabetes., Gachon Univ., Korea

PB0604 Daily intake of pyroglutamyl peptides-rich fermented rice drink changed gut microbiota who have particular pattern of microbiota in healthy volunteers

Sayori Wada[1], Mayuko Kotani[1], Chihiro Itoh[1], Toko Kasuno[1], Hirokazu Taniguchi[1], Kenji Sato[2], Akane Higashi[1], Yuji Naito[3]

[1]Div. of Appl. Life Sci. Grad. Sch. of Life and Environ. Sci., Kyoto Pref. Univ., Japan, [2]Div. of Appl Biosci., Grad. Sch. of Agric., Kyoto Univ., Japan, [3]Dept. of Mol. Gastroenterol. and Hepatol., Kyoto Pref. Univ. of Med., Japan

PB0605 Pro-Hyp is specifically incorporated in fibroblast expressing p75NTR

Kazuhiro Sawada[1], Kazunobu Yoshikawa[1], Tomoko Asai[2], Kenji Sato[1]

[1]Div. of Appl. Biosci., Grad. Sch. of Agric., Kyoto Univ., Japan, [2]Dept. of Food Sci. and Nutr., Fac. of Human Life and Env. Sci., Nara Women's Univ., Japan

PB0606 Screening of various peptide sequences of food proteins for their potential as prolyl endopeptidase inhibitors

Chia-Ling Jao[1], Ping-Jung Liu[2], Kuo-Chiang Hsu[2]

[1]Dept. of Food Beverage Mgmt., Tung-Fang Univ., Taiwan, [2]Dept. of Nutr., China Med. Univ., Taiwan

PB0607 Albumin extracted from rice bran is resistant to digestion and adsorbs glucose

Chiaki Sugimoto[1], Aya Hamada[1], Shigenobu Ina[1], Yusuke Yamaguchi[1], Hitoshi Kumagai[2], Hitomi Kumagai[1]

[1]Coll. of Bioresour. Sci., Nihon Univ., Japan, [2]Fac. of Home Economics, Kyoritsu Women's Univ., Japan

PB0608 Effect of HCl-treated wheat protein on antigen-presenting cells

Hayato Kobayashi, Ryosuke Abe, Narumi Matsukaze, Yusuke Yamaguchi, Hitomi Kumagai

Coll. of Bioresour. Sci., Nihon Univ., Japan

PB0609 The novel plant derived supplement containing the protein hydrolysate "JPS" enhances functional recovery of spinal cord injury

Jintanaporn Wattanathorn[1,2], Parichart On-ong-arj[1]

[1]Res. Inst. For HHP&HP, Khon Kaen Univ., Thailand, [2]Physiol. Dept, Fac. Med, Khon Kaen Univ., Thailand

PB0610 Liver hydrolysate improves depressive-like behavior in olfactory bulbectomized mice: involvement of hippocampal neurogenesis through AMPK/BDNF/CREB pathway

Kotaro Yamada[1], Osamu Nakagawasai[2], Takayo Odaira[2], Kohei Takahashi[2,3], Wataru Nemoto[2], Wakana Sakuma[2], Jia-Rong Lin[2], Hidetomo Sakurai[1], Koichi Tan-no[2]

[1]Consumer Healthcare Products Dev., Zeria Pharm. Co., Ltd., Japan, [2]Tohoku Med. and Pharm. Univ., Japan, [3]Intl. Univ. of Health and Welfare, Japan

PB0611 Flaxseed proteome as precursors of antioxidant peptides: an *in silico* study

Dawei Ji[1], Chibuike C. Udenigwe[2,3], Dominic Agyei[1,2]

[1]Dept. of Food Sci., Univ. of Otago, New Zealand, [2]Sch. of Nutr. Sci., Univ. of Ottawa, Canada, [3]Dept. of Chem and Biomol. Sci., Univ. of Ottawa, Canada

PB0612 Dipeptides can transport across the blood-brain barrier in mouse brain

Hayato Kiyohara[1], Mitsuru Tanaka[1], Shinya Dohgu[2], Genki Komabayashi[1], Fuyuko Takata[2], Yasufumi Kataoka[2], Takashi Nirasawa[3], Toshiro Matsui[1]

[1]Div. of Biores. and Bioenviron. Sci., Grad. Sch. of Agric. Sci., Kyushu Univ., Japan, [2]Div. of Pharm. Care and Health Sci., Fukuoka Univ., Japan, [3]Bruker Japan K.K., Japan

PB0613 Generation of Pro-Hyp and p75NTR- positive cell in cultured skin

Xin Wei[1], Shiro Jimi[2], Kazunobu Yoshikawa[3], Tomoko Asai[4], Kenji Sato[1]

[1]Div. of Appl. Biosci., Grad. Sch. of Agric., Kyoto Univ., Japan, [2]Cent. Lab. for Pathol. and Morphol., Fac. of Med., Fukuoka Univ., Japan, [3]Div. of Appl. Biosci., Grad. Sch. of Agric., Kyoto Univ., Japan, [4]Dept. of Food Sci. and Nutr., Fac. of Human Life and Environ. Sci., Nara Women's Univ., Japan

PB0614 Dipeptidyl peptidase IV inhibitory activities of bonito dashi in human

Eiji Seki[1], Yoshifumi Fujiwara[1], Junko Suzuki[2], Takuya Yamane[3], Hideo Satsu[4], Iwao Ohkubo[5]

[1]Katuobushi Dashi Lab., Yamaki Co., Ltd., Japan, [2]Dept. of Nutr. Sch. of Nursing and Nutr., Tenshi Col., Japan, [3]Grad Sch. of Life and Environ. Sci., Osaka Pref. Univ., Japan, [4]Dept. of Biotech., Maebashi Inst. of Technol., Japan, [5]Mikasa City Hosp., Japan

PB0615 Antioxidant properties and myogenic differentiation of protein hydrolysates in soybean and mealworm (*Tenebrio Molitor*) larvae

Yang Hou, Xiaotong Yu, Yookyung Kim

Dept. of Human Ecology, Grad. Sch., Korea Univ., Korea

PB0616 Characterization and functional properties of gelatin extracted from chinese giant salamander (*Andrias davidianus*) skin

Wen-gang Jin[1], Jinjin Pei[1], Yi-nan Du[2], Jingfeng Pan[2], Ruichang Gao[3], Haitao Wu[2]

[1]Bio-resources Key Lab. of Shaanxi Province, Sch. of Biol. Sci. and Eng., Shaanxi Univ. of Technol., China, [2]Natl. Eng. Res. Cent. for Seafood, Sch. of Food Sci. and Technol., Dalian Polytech. Univ., China, [3]Coll. of Food and Biol. Technol., Jiangsu Univ., China

PB0617 Novel ghrelin-releasing peptide derived from wheat protein

Kana Tanikawa[1], Shimon Abe[1], Hiroshi Iwakura[2], Masaru Sato[3], Atsushi Kurabayashi[3], Hideyuki Suzuki[3], Miki Makita[4], Hiroyuki Ikemoto[4], Shigenobu Matsumura[1], Kazuo Inoue[1], Kousaku Ohinata[1]

[1]Div. of Food Sci. and Biotechnol., Grad. Sch. of Agric., Kyoto Univ., Japan, [2]The First Dept. of Med., Wakayama Med. Univ., Japan, [3]Dept. of Appl. Genomics, Kazusa DNA Res. Inst., Japan, [4]Health Care Res. Cent., Nisshin Pharma Inc, Japan

PB0619 Study on the structure of oligopeptides with beauty effect in industrial-scale produced rice protein hydrolysate

Yuqing Wang

China Natl. Res. Inst. of Food and Fermentation Ind., China

PB0620 Study on the structure of oligopeptides with the function of improving athletic ability in industrial-scale produced corn gluten meal hydrolysate

Liang Chen

China Natl. Res. Inst. of Food and Fermentation Ind., China

B) Food Factors: Polyphenols and Antioxidants

PB0701 The beneficial effects of pomegranate polyphenols in regulating lipid metabolism

Jianke Li, Chen Hou

Coll. of Food Eng. and Nutr.al Sci., Shaanxi Normal Univ., China

PB0702 Effect of wine pomace product on IFN-γ and TNF-α inflammation and tumor invasion on endothelial cells

Pilar Muñiz, Gisela Gerardi, Monica Cavia-Saiz, M. D. Rivero-Pérez, Gonzalo Salazar-Mardones, M. Luisa Gonzalez-SanJose

Dept. of Biotechnol. and Food Sci. Universidad de Burgos., Spain

PB0703 Gallic acid suppresses hepatic steatosis, apoptosis, and inflammation caused by the interaction with macrophages

Miori Tanaka[1,2], Akari Sato[1], Yoshimi Kishimoto[3], Hideaki Mabashi-Asazuma[1,4], Kazuo Kondo[3,5], Kaoruko Iida[1,4]

[1]Dept. of Food and Nutr. Sci., Grad. Sch. of Hum. and Sci., Ochanomizu Univ., Japan, [2]Dept. of Nutr. Sci. and Food Safety, Tokyo Univ. of Agric., Japan, [3]Endowed Res. Dept. Food for Health, Ochanomizu Univ., Japan, [4]Inst. for Hum. Life Innov., Ochanomizu Univ., Japan, [5]Inst. of Life Innov., Toyo Univ., Japan

PB0704 Search and analysis of food components regulating urate transporter ABCG2

Yasuhiro Enomoto[1], Taishi Kondo[2], Yu Toyoda[3], Hiroshi Suzuki[3], Tappei Takada[3], Atsuyoshi Nishina[4], Hideo Satsu[2]

[1]Dept. of Biotech., Grad. Sch. of Eng., Maebashi Inst. Technol., Japan, [2]Dept. of Biotech., Maebashi Inst. Technol., Japan, [3]Dept. of Pharm., The Univ. of Tokyo Hosp., Japan, [4]Coll. of Sci. and Technol. Nihon Univ., Japan

PB0705 The antioxidant activity of epigallocatechin gallate (EGCG) esters in lipidic systems

Han Peng, Fereidoon Shahidi

Dept. of Biochem., Memorial Uni., Canada

PB0706 The nutritional compositions and antioxidant activities of bee pollen collected in various areas of Korea

Gil-Ran Lee[1,2], Mok-Ryeon Ahn[1,2]

[1]Dept. of Food Sci. Nutr., Dong-A Univ., Korea, [2]Cent. for Sliver-Targeted Biomaterial, BB21 Plus Program, Grad. Sch., Dong-A Univ., Korea

PB0707 Screening of compounds that inhibit the interaction between curcumin and bovine serum albumin to improve the physiological activity of curcumin

Mayuko Itaya[1], Taiki Miyazawa[2], Takahiro Eitsuka[1], Atsushi Imaizumi[3], Kiyotaka Nakagawa[1]

[1]Dept. of Biosci. Biotech. for Futr. Bioind., Grad. Sch. of Agric. Sci., Tohoku Univ., Japan, [2]Inst. of Biomater. Bioeng., Tokyo Med. Dent. Univ., Japan, [3]Therabiopharma Inc., Japan

PB0708 Antioxidant capacity of deep-fried products prepared using millet flour batter

Asuka Taniguchi[1], Nami Kyogoku[2], Rie Kobayashi[1]

[1]Grad. Sch. of Humanities and Life Sci., Tokyo Kasei Univ., Japan, [2]Dept. of Food and Nutr., Kanazawa Gakuin Coll., Japan

PB0709 Studies on the polyphenols bioaccessibility and antioxidant activity during simulated in vitro digestion of Japanese pickled plums

Jutalak Suwannachot, Sunantha Ketnawa, Yukiharu Ogawa

Grad. Sch. of Hortic., Chiba Univ., Japan

PB0710 The distinguishable absorption and metabolism of quercetin coexisted with other food components

Rikito Mitsuzane[1], Toshiyuki Nakamura[1], Shintaro Munemasa[1], Yoshiyuki Murata[1], Yoshimasa Nakamura[1]

Grad. Sch. of Environ. Life. Sci., Okayama Univ., Japan

PB0711 Evaluation of the antioxidant activity of *Petasites japonicus* Maxim. flower bud extracts

Miki Hiemori-Kondo[1,2], Daisuke Shinya[2], Mika Nii[3]

[1]Dept. of Food Nutr. Sci., Tokushima Bunri Univ., Japan, [2]Dept. of Food Nutr. Sci., Grad. Sch. of Human Life Sci., Tokushima Bunri Univ., Japan, [3]Dept. of Resour. Environ. Res., TAFF TSC, Japan

PB0712 Phenyl ethanoid glycosides from *Lantana* montevidensis and their antioxidant and cell antiproliferative activity

Yoshiharu Okuno, Keiji Yamasaki

Dept. of Appl. Chem. and Biochem., Natl. Inst. of Technol., Wakayama Coll., Japan

PB0713 Antioxidant activity and polyphenols in main woody plant leaves growing forest floor in beech coppice in Uonuma, Niigata

Tomoko Yamaguchi[1], Chika Nakashima[1], Keigo Mikame[2], Tomohiko Kamitani[2]

[1]Fac. of Edu., Niigata Univ., JPN, [2]Fac. of Agric., Niigata Univ., JPN

PB0714 Change of microwave-cooked pigmented rice structure and antioxidant phytochemicals before and during in vitro digestion

Sukanya Thuengtung, Yukiharu Ogawa

Grad. Sch. of Hort., Chiba Univ., Japan

PB0715 Analysis of the cytotoxic mechanisms of sulforaphane

Seiya Nishiba[1], Shigeki Takeda[1], Noritaka Adachi[2], Aya Kurosawa[1,2,3]

[1]Div. of Mol. Sci., Grad. Sch. of Sci. Tech., Gunma Univ., Japan, [2]Grad. Sch. of Nanobiosci., Yokohama City Univ., Japan, [3]Cent. Food Sci. Wellness, Gunma Univ., Japan

PB0716 The effects of resveratrol and piceid on macrophage efferocytosis

Naomi Abe-Kanoh[1], Yuki Hashimoto[2], Haruka Yamamoto[2], Miyuki Uemura[2]

[1]Inst. of Biomed. Sci., Tokushima Univ. Grad. Sch., Japan, [2]Sch. of Med. Nutr., Tokushima Univ., Japan

PB0717 Evaluation of the preventive effect of glucosyl-hesperidin on adenine-induced kidney injury by using *in vivo* Saa3-promoter bioluminescence imaging

Kotaro Hashimoto[1], Taishi Kariya[1], Nao Yazawa[1], Yohei Sanada[1], Takayuki Koyano[2], Takao Hashimoto[1], Makoto Matsuyama[2], Thanutchaporn Kumrungsee[1], Fons AJ van de Loo[3], Noriyuki Yanaka[1]

[1]Grad. Sch. of Integrated Sci. for Life, Hiroshima Univ., Japan, [2]Div. of Mol. Genetics, Shigei Med. Res. Inst., Japan, [3]Dept. of Rheumatol., Radboud Univ. Med. Cent., The Netherlands

PB0718 Effect of matcha green tea on endoplasmic reticulum stress in monocytic cells

Yoshimi Kishimoto[1], Ikue Takeuchi[2], Tomomi Iwashima[3], Chie Taguchi[1], Kazuo Kondo[1,2]

[1]Endowed Res. Dept. 'Food for Health', Ochanomizu Univ., Japan, [2]Grad. Sch. of Food Nutr. Sci., Toyo Univ., Japan, [3]Dept. of Food Nutr. Sci., Grad. Sch. of Humanities and Sci., Ochanomizu Univ., Japan

PB0719 Bioactive properties of saba banana and their changes during simulated *in vitro* digestion process

Florencio, C. Reginio Jr.[1,2], Wei Qin[1], Sunantha Ketnawa[1], Yukiharu Ogawa[1]

[1]Dept. of Environ. Sci. for Bioprod., Grad. Sch. of Hortic., Chiba Univ., Japan, [2]Inst. of Food Sci. and Technol., Coll. of Agric. and Food Sci., Univ. of the Phil., Philippines

PB0720 Riceberry bran oil ameliorates oxidative stress and hepatotoxicity induced by acetaminophen overdose in mice

Rawiwan Wongpoomchai[1,2], Warunyoo Phannasorn[1], Napaporn Khuanphram[1], Suphachai Charoensin[3]

[1]Dept. of Biochem., Fac. Med., Chiang Mai Univ., Thailand, [2]Func. Food Res. Cen. for Well-Being, Chiang Mai Univ., Thailand, [3]Div. Nutr., Sch. Med Sci, Univ. Phayao, Thailand

PB0721 Green tea polyphenol EGCG enhances anticoagulation factor TFPI expression by activating 67LR signaling

Ren Yoshitomi, Hirokatsu Kanzaki, Takuya Takakura, Shigeyuki Totoki, Motofumi Kumazoe, Yoshinori Fujimura, Hirofumi Tachibana

Div. of Appl. Biol. Chem., Grad. Sch. of Bioresour. and Bioenviron. Sci., Kyushu Univ., Japan

PB0722 Black garlic extract suppresses oxidation of low-density lipoprotein

Hirofumi Arai[1], Akari Yasunaga[1,2], Daishi Yahagi[2], Shunichi Yasutake[2], Ryota Hosomi[3], Kenji Fukunaga[3], Mikako Takasugi[4]

[1]Dept. of Biotechnol. and Environ. Chem., Kitami Inst. of Technol., Japan, [2]Nihon Seiyaku Kogyo Co. Ltd., Japan, [3]Fac. of Chem., Materials and Bioeng., Kansai Univ., Japan, [4]Dept. of Life Sci., Kyushu Sangyo Univ., Japan

PB0723 Apigenin and luteolin display differential hypocholesterolemic mechanisms in mice fed a high-fat diet

Tsz Yan Wong[1], Yan Qin Tan[1], Shu-mei Lin[2], Lai K. Leung[1]

[1]Food and Nutr. Sci. Programme, Sch. of Life Sci.,The Chinese Univ. of Hong Kong, Hong Kong, [2]Dept. of Food Sci., Natl. Chiayi Univ., Taiwan

PB0724 Dose reduction of the α-glucosidase inhibitor acarbose by xanthones from Cyclopia genistoides–enhanced nutraceutical potential through synergism

Neil Miller[1,2], Christiaan Malherbe[1], Elizabeth Joubert[1,2]

[1]Plant Bioactives Group, Agric. Res. Council (ARC), South Africa, [2]Dept. of Food Sci., Stellenbosch Univ., South Africa

PB0725 Eugenol ameliorates 2 diabetes mellitus in mice via activation on muscle glucose uptake through TRPV1/AMPK/GLUT4

Yuge Jiang[1,2], Qiuli Gao[2], Yuncong Xu[2], Bowen Li[2], Yonghui Shi[1,2], Guowei Le[1,2]

[1]The State Key Lab. of Food Sci. and Technol., Jiangnan Univ., China, [2]Sch. of Food Sci. and Tech. Jiangnan Univ., China

PB0726 *In vitro* antioxidant and anti-inflammatory ability of lignin molecules from the sclereids of Psidium guajava fruits by NaOH extraction

Chia-En Li, Zwe-Ling Kong

Dept. of Food Sci., Natl. Taiwan Ocean Univ., Taiwan

PB0727 Solvent extraction and discrimination of Kyoho skin, seed, and flesh antioxidant activities: An unsupervised case study using advanced chemometrics

Kandi Sridhar, Albert Linton Charles

Dept. of Tropical Agric. and Intl. Cooperation, Natl. Pingtung Univ. of Sci. and Technol., Taiwan

PB0728 Color stability of anthocyanin extract from wastewater of purple sweet potato starch processing

Elisa Julianti, Ridwansyah, Era Yusraini

Dept. of Food Sci. and Tech., Fac. of Agric., Universitas Sumatera Utara, Indonesia

PB0729 In-depth phenolic characterisation of Cyclopia pubescens (honeybush tea) using 2D chromatography and structure elucidation

Nico A. Walters[1,2], Elizabeth Joubert[1,2], Andre De Villiers[3], Ombeline Danton[4], Dalene De Beer[1,2]

[1]Plant Bioactives Group, Agricultural Res. Council (ARC), South Africa, [2]Dept. of Food Sci., Stellenbosch Univ., South Africa, [3]Dept. of Chem. and Polymer Sci., Stellenbosch Univ., South Africa, [4]Pharm. Biol., Pharmacenter, Univ. of Basel, Switzerland

PB0730 Biological activity of subcritical water extracts from citrus peel

Dong-Shin Kim, Sang-bin Lim

Dept. of Food Bioeng., Jeju Natl. Univ., Korea

PB0731 Biosynthesis of novel highly water soluble hesperetin phosphate conjugates via a unique microbial biotransformation pathway

Chen Hsu[1], Yuan-Po Liu[2], Nan-Wei Su[1,2]

[1]Dept. of Agric. Chem., Natl. Taiwan Univ., Taiwan, [2]Dept. of Biochem. Sci. and Technol., Natl. Taiwan Univ., Taiwan

PB0732 A new enzyme for biosynthesis water-soluble flavonoid O-phosphate from *Bacillus subtilis* BCRC80517

Chen Hsu, Nan-Wei Su

Dept. of Agric. Chem., Natl. Taiwan Univ., Taiwan

PB0736 Combined effect of α-tocopherol and antioxidants on liposome oxidation by hydroxyl radicals

Ikuko Minami[1], Ayumi Umeda[1], Chikako Inaba[1], Hiroshi Kobayashi[2], Hiroya Ishikawa[2]

[1]Intl. Coll. of Arts and Sci., Fukuoka Women's Univ., Japan, [2]Grad. Sch. of Health and Environ. Sci., Fukuoka Women's Univ., Japan

PB0738 Augmentation of anti-proliferative and anti-tumor effects of oxaliplatin by luteolin in colorectal tumor model

Chan ho Jang[1], Nayoung Moon[1], Jisun Oh[2], Jong-Sang Kim[1,2]

[1]Sch. of Food Sci Biotechnol, Kyungpook Nat'l Univ., Korea, [2]Inst. Agric. Sci. Technol., Kyungpook Natl. Univ., Korea

PB0741 Neuroprotective potential of novel ferulic acid-rutinoside enzymatically synthesized using ruinose in *C. elegans*

Kanako Matsumoto[1], Patipark Kueanjinda[2], Takakazu Mitani[1], HyunYoung Park[3], Dhiraj A. Vattem[3], Soichiro Nakamura[1], Shigeru Katayama[1,2]

[1]Dept. of Agric., Grad. Sch. of Sci. Tech., Shinshu Univ., Japan, [2]Div. of Biomol. Innov, Biomed. Inst., Shinshu Univ., Japan, [3]Edison Biotech. Inst., Ohio Univ., USA

B) Food Factors: Probiotics and Prebiotics

PB0801 *In vitro* adsorption mechanism of acrylamide by lactic acid bacteria

Meili Shao, Honghua Xu, Fei Teng, Guoping Yu

Coll. of Food Sci., Northeast Agric. Univ., China

PB0802 Amelioration of hepatic steatosis by ingestion of raffinose via modulation of bile acid metabolism in rats

Kenta Maegawa[1], Satoshi Ishizuka[2]

[1]Grad. Sch. of Agric., Hokkaido Univ., Japan, [2]Res. Fac. of Agric., Hokkaido Univ., Japan

PB0803 Developing simple extraction of potato arabinogalactan acts as prebiotics

Masahiro Saito[1], Masaaki Konishi[2]

[1]Dept. of Biotech. and Environ. Chem., Grad. Sch. of Eng., Kitami Inst. of Technol., Japan, [2]Biotech. and Food Chem. Crs. Program, Sch. of Regional Innov. and Social Design Eng., Kitami Inst. of Technol., Japan

PB0804 Search and analysis for probiotics which could enhance IL-12 expression in macrophage-like cells

Tsukiho Hiura[1], Kana Umetani[2], Masahiko Suzuki[3], Kanata Hagiwara[2], Mizuki Honda[1], Yuji Tsujikawa[3], Iwao Sakane[3], Hidenori Hayashi[2], Hideo Satsu[2]

[1]Dept. of Biotech., Grad. Sch. of Eng., Maebashi Inst. Technol., Japan, [2]Dept. of Biotech., Maebashi Inst. Technol., Japan, [3]Central Res. Inst., ITO EN Ltd., Japan

PB0805 The effect of combination with water-soluble and -insoluble dietary fiber on mice microbiota

Hiroyuki Sasaki[1,3], Aya Watanabe[1], Yuki Nakayama[1], Fumiaki Nakamura[2], Yoichi Nakao[2], Shigenobu Shibata[1]

[1]Lab. of Physiol. and Pharmacol., Sch. of Advanced Sci. and Eng., Waseda Univ., Japan, [2]Lab. of Chemical Biol., Sch. of Advanced Sci. and Eng., Waseda Univ., Japan, [3]AIST-Waseda Univ. Computational Bio Big-Data Open Innovation Lab. (CBBD-OIL), Japan

PB0806 An assessment of the stability and prebiotic potential of crude flaxseed mucilage

Thu M. Nguyen[1], Dominic Agyei[1,2], Ian Sims[2,3], Gerald Tannock[2,4]

[1]Dept. of Food Sci., Univ. of Otago, New Zealand, [2]Microbiome Otago., Univ. of Otago, New Zealand, [3]Ferrier Res. Inst., Victoria Univ. of Wellington, New Zealand, [4]Dept. of Microbiol. & Immunol., Univ. of Otago, New Zealand

PB0807 Application of isomalto-oligosaccharide: development of functional food formula for risk reduction of chronic kidney disease

Kridsada Keawyok[1], Santad Wichienchot[1], Saowakon Wattanachant[2], Nualpun Sirinupong[1], Preeya Dat-arun[1], Suwikran Wongpraphairot[3]

[1]IGS-Nutraceutical and Functional Food, Prince of Songkla Univ., Thailand, [2]Dept. of Food Technol., Fact. of Agro-Industry, Prince of Songkla Univ., Thailand, [3]Dept. of Internal Med., Fact. of Med., Prince of Songkla Univ., Thailand

PB0808 Preventive effect of allicin-free garlic on gut microbiome dysbiosis

Keyu Chen[1], Kun Xie[1], Kozue Sakao[1,2], De-Xing Hou[1,2]

[1]United Grad. Sch. of Agric. Sci., Kagoshima Univ., Japan, [2]Dept. of Food Sci. and Biotech., Fac. of Agric., Kagoshima Univ., Japan

PB0809 Evaluation of the prebiotic effects of inulin-type fructans on human colonic microbiota

Sho Yamamoto, Itsuko Fukuda

Dept. of Agrobiosci., Grad. Sch. of Agric. Sci., Kobe Univ., Japan

PB0810 The host immunoresponsiveness influences probiotic functions of inulin

Yu Arima[1], Kenjiro Shiozawa[2], Masayuki Noguchi[2], Yori Ozaki-Masuzawa[2], Takashi Hosono[1,2], Taiichiro Seki[1,2]

[1]Dept. of Appl. Life Sci., Grad. Sch. of Bioresour. Sci., Nihon Univ., Japan, [2]Dept. of Chem. and Life Sci., Coll. of Bioresour. Sci., Nihon Univ., Japan

PB0811 Effect of combined consumption of *Lactobacillus brevis* KB290 and β-carotene on minor diarrhea-predominant irritable bowel syndrome-like symptoms

Nobuo Fuke[1], Koichi Aizawa[1], Hiroyuki Suganuma[1], Tomohisa Takagi[2], Yuji Naito[2]

[1]Nature & Wellness Res. Dept., Innovation Div., KAGOME Co., Ltd., Japan, [2]Dept. of Mol. Gastroenterol. and Hepatol., Grad. Sch. of Med. Sci., Kyoto Pref. Univ. of Med., Japan

PB0812 Efficacy of partially hydrolyzed guar gum on high fat diet-induced metabolic syndrome in mice

Aya Abe[1,2], Keiko Abe[2], Ryo Inoue[3], Yuji Naito[4], Zenta Yasukawa[1,5], Makoto Ozeki[1,5], Tsutomu Okubo[1,5], Shinji Okada[2]

[1]Nut. Div., Taiyo Kagaku Co., Ltd., Japan, [2]Grad. Sch. of Agri. and Life Sci., Tokyo Univ., Japan, [3]Lab. of Animal Sci., Dep. of Agri. and Life Sci., Kyoto Pref. Univ., Japan, [4]Mol. Gastroentero. and Hepatol., Grad. Sch. of Med. Sci., Kyoto Pref. Univ. of Med., Japan, [5]Acad.-Ind. Grad. Sch., Mie Univ., Japan

PB0813 Co-expression of alcohol dehydrogenase and aldehyde dehydrogenase in food-grade *Bacillus subtilis* for alcohol detoxification

Yingjian Lu[1], Jing Lu[2], Xiangfei Li[1], Xiaoyu Zhu[2], Chong Zhang[2], Fengxia Lu[2], Zhaoxin Lu[2]

[1]Dept. of Food Sci. Eng., Nanjing Univ. of Finance and Economics, China, [2]Lab. of Enzyme Eng., Coll. of Food Sci. Technol., Nanjing Agric. Univ., China

PB0814 Screening and study of probiotics with antiviral potential

Hsiu-Han Hsu[1], Je-Ruei Liu[1,2,3]

[1]Dept. of Animal Sci. and Technol., Natl. Taiwan Univ., Taiwan, [2]Inst., of Biotechnol., Natl. Taiwan Univ., Taiwan, [3]Agric. Biotechnol. Res. Cent., Academia Sinica, Taiwan

B) Food Factors: Sulfur Compounds

PB0901 Garlic-odor precursor suppresses melanoma tumor growth by inducing apoptosis

Tomoya Sakaguchi[1], Tomoaki Yazaki[1], Yusuke Yamaguchi[1], Hiroyuki Hara[2], Hitomi Kumagai[1]

[1]Coll. of Bioresource Sci., Nihon Univ., Japan, [2]Sch. of Med., Nihon Univ., Japan

PB0902 Suppressive effect of garlic-odor precursor on blood-ethanol elevation

Taisei Hagio[1], Ayumu Hase[1], Yusuke Yamaguchi[1], Harumi Uto-Kondo[1], Takeshi Saito[2], Hitomi Kumagai[1]

[1]Coll. of Bioresour. Sci., Nihon Univ., Japan, [2]ACERA Food R&D Cent., ACERA Co., Ltd, Japan

PB0903 Induction of phase II enzymes by a flavor compound from radish sprouts

Kazuki Ogawa, Mikio Sugiki, Yusuke Yamaguchi, Hitomi Kumagai

Dept. of Chem. and Life Sci., Nihon Univ., Japan

PB0904 Improvement of the benzyl isothiocyanate stability in aqueous solutions

Toshiyuki Nakamura, Yoshiyuki Murata, Yoshimasa Nakamura

Grad. Sch. of Environ. Life Sci., Okayama Univ., Japan

PB0905 Radiation-protective abilities of DADS, a garlic oil component in X-ray irradiated mice
Tetsuo Nakajima[1], Yasuharu Ninomiya[1], Mitsuru Nenoi[2]
[1]Dept. of Radiation Effects Res., Natl. Inst. of Radiol. Sci., QST, Japan, [2]Dept. of Safety Administration, Natl. Inst. of Radiol. Sci., QST, Japan

PB0906 Benzyl isothiocyanate enhances insulin signaling in adipocytes
Sayuri Nakata, Ying Liang, Toshiyuki Nakamura, Shintaro Munemasa, Yoshiyuki Murata, Yoshimasa Nakamura
Grad. Sch. of Environ. Life Sci., Okayama Univ., Japan

PB0907 Effects of 6-(methylsulfinyl)hexyl isothiocyanate on induction of aldehyde dehydrogenase in hepatocytes
Tomoya Kitakaze, Sihao Yuan, Hitoshi Ashida
Dept. of Agrobiosci., Grad. Sch. of Agric. Sci., Kobe Univ., Japan

PB0908 Analysis of mechanism underlying gastric mucosal cell death induced by sodium sulfite
Moeri Oshimo, Kenji Kai, Mitsugu Akagawa
Grad. Sch. of Life and Environ. Sci., Osaka Pref. Univ., Japan

PB0909 Oral galactooligosaccharide administration diminishes the improvement in allergy severity induced by oral immunotherapy in an allergic mouse model
Akihiro Maeta, Risako Katahira, Kyoko Takahashi
Dept. of Food Sci. and Nutr., Mukogawa Women's Univ., Japan

B) Food Factors: Vitamins

PB1001 Characterization of vitamin B_{12} compounds in food ingredients used in chinese cuisine
Fei Teng, Guoping Yu, Meili Shao, Honghua Xu
Coll. of Food Sci., Northeast Agric. Univ., China

PB1002 Vitamin A plays a pivotal role in hepatic-retinal axis under dual effects of acetaminophen injections and excessive ocular LED exposure
Min-Chun Chang[1], David Pei Cheng Lin[2], Han-Hsin Chang[1]
[1]Dept. of Nutr., Chung Shan Med. Univ., Taiwan, [2]Dept. of Med. Lab. and Biotechnol., Chung Shan Med. Univ., Taiwan

PB1003 Characterization of the monoclonal antibody to α-carboxyethyl hydroxychroman
Daiki Moriya, Toshiyuki Nakamura, Shintaro Munemasa, Yoshiyuki Murata, Yoshimasa Nakamura
Grad. Sch. of Environ, Life. Sci., Okayama Univ., Japan

PB1004 Development of a method to analyze the water-soluble vitamins in vegetables

Yu-Tsung Lee[1], Hui-Yi Chang[1], Li-Heng Pao[1], Chun-Hui Chiu[1,2]

[1]Chang Gung Univ. of Sci. and Technol., Taiwan, [2]Dept. of Traditional Chinese Med., Chang Gung Memorial Hosp., Taiwan

PB1005 Vitamin B_{12} and folate contents of commercially available *Chlorella* supplements

Hiroyasu Harada, Kyohei Koseki, Tomohiro Bito, Fumio Watanabe

Dept. of Agric. Sci., Grad. Sch. of Sustainability Sci., Tottori Univ., Japan

PB1006 Characterization of vitamin B_{12} compounds in edible insects

Naho Okamoto[1], Fumi Nagao[2], Tomohiro Bito[2], Yukinori Yabuta[1,2], Prangthip Pattaneeya[3], Fumio Watanabe[1,2]

[1]United. Grad. Sch. of Agric. Sci., Tottori Univ., Japan, [2]Fac. of Agric., Tottori Univ., Japan, [3]Fac. of Trop. Med., Mahidol Univ., Thailand

PB1007 Identification of vitamin K binding protein by using magnetic beads to reveal vitamin K metabolic mechanism

Masaharu Kobayashi[1], Satoshi Asano[2], Ayako Furukawa[3], Maya Kamao[4], Yoshitomo Suhara[1,2], Yoshihisa Hirota[1,2]

[1]Sys. Eng. and Sci., Grad. Sch. of Eng. and Sci., Shibaura Inst. of Tech., Japan, [2]Dept. of Life Sci., Coll. of Sys. Eng., Shibaura Inst. of Tech., Japan, [3]Fac. of Pharm. Sci., Suzuka Univ. of Med. Sci., Japan, [4]Ext. Cent., Kobe Pharm. Univ., Japan

PB1008 Fortification of brown rice with folic acid through surface modification and absorption

Rhowell N. Tiozon Jr.[1,3], Aldrin P. Bonto[1,3], Drexel H. Camacho[1,2], Glen Oyong[2], Nese Sreenivasulu[3], Catleya Rojviriya[4]

[1]Chem. Dept., De La Salle Univ., Philippines, [2]Organic Materials and Interfaces Unit, CENSER, De La Salle Univ., Philippines, [3]Grain Quality and Nutr. Cent., Intl. Rice Res. Inst., Philippines, [4]Synchrotron Light Res. Inst. (Public Organization), Thailand

PB1009 Comparative analysis of the female reproductive functions among genetically modified rats in *Cyp27b1* or vitamin D receptor

Mana Yamaguchi, Miyu Nishikawa, Shinichi Ikushiro, Toshiyuki Sakaki

Fac. of Eng., Toyama Pref. Univ., Japan

PB1010 Effects of vitamin D on development of bone and skeletal muscle in *Cyp27b1*-KO and *Vdr*-KO rickets rat models

Kento Hibi, Miyu Nishikawa, Shinichi Ikushiro, Toshiyuki Sakaki

Fac. of Eng., Toyama Pref. Univ., Japan

PB1011 Evaluation of the vitamin K side-chain cleavage mechanism by use of hydrogenated vitamin K_1

Satoshi Asano[1], Maya Kamao[2], Yoshitomo Suhara[1], Yoshihisa Hirota[1]

[1]Dept. Bio Sci. Eng., Coll. Sys. Eng., Shibaura Inst. Technol., Japan, [2]Ext. Cent., Kobe Pharm. Univ., Japan

PB1012 Effects of vitamin D on the differentiation of mouse embryonic cerebrum derived neural stem cells

Yoshihisa Hirota[1,2], Maya Kamao[2], Toshiyuki Sakaki[3], Naomi Osakabe[1], Yoshitomo Suhara[1], Toshio Okano[2]

[1]Dept. Biosci. and Eng., Coll. Sys. Eng. and Sci., Shibaura Inst. Technol., Japan, [2]Dept. Hyg. Sci., Kobe Pharm. Univ., Japan, [3]Dept. Pharm. Eng., Fac. Eng., Toyama Pref. Univ., Japan

PB1013 Transcriptome analysis reveals mechanism of Vitamin K-induced neuronal differentiation

Yuta Takagi[1], Yutaro Yamashita[1], Maya Kamao[2], Yoshitomo Suhara[1], Yoshihisa Hirota[1]

[1]Sys. Eng. and Sci., Grad. Sch. Eng. and Sci., Shibaura Inst. Technol., Japan, [2]Ext. Cent., Kobe Pharm Univ., Japan

PB1014 Structure-activity correlation of vitamin K revealed by neural differentiation activity

Yutaro Yamashita[1], Mayu Okazeri[2], Taiki Sato[1], Maya Kamao[3], Yoshitomo Suhara[1,2], Yoshihisa Hirota[1,2]

[1]Sys. Eng. Sci., Grad. Sch. Eng. Sci., Shibaura Inst. Tech., Japan, [2]Dept. Biosci. Eng., Coll. Sys. Eng., Shibaura Inst. Technol., Japan, [3]Ext. Cent., Kobe Pharma. Univ., Japan

PB1015 Comparison of breast milk vitamin D and 25-hydroxyvitamin D concentration of Japanese breastfeeding women in 1989 and 2016-2017

Mayu Nishino[1], Akiko Kuwabara[2], Honami Ogasawara[3], Maya Kamao[4], Shunjiro Kobayashi[5], Junichi Yamamura[5], Naoko Tsugawa[1,3]

[1]Div. of Human Dietics, Grad. Sch.of Human Sci., Osaka Shoin Women's Univ., Japan, [2]Dept. of Clin. Nutr., Fac. of Comp. Rehab., Osaka Pref. Univ., Japan, [3]Dept. of Health and Nutr., Osaka Shoin Women's Univ., Japan, [4]Extension Ctr., Kobe Pharm. Univ., Japan, [5]Res. and Dev. Dept., Bean Stalk Snow Co., Ltd., Japan

PB1016 Cross-sectional survey for vitamin D status of healthy Japanese adults in the health life research complex program

Naoko Tsugawa[1,2], Akiko Kuwabara[3], Chihiro Ura[2], Honami Ogasawara[1], Kei Mizuno[4], Yasuyoshi Watanabe[4], Kiyoshi Tanaka[5]

[1]Dpt. of Health and Nutr., Osaka Shoin Women's Univ., Japan, [2]Div. of Human Dietics, Grad. Sch. of Human Sci., Osaka Shoin Women's Univ., Japan, [3]Dept. of Clin. Nutr., Fac. of Comp. Rehab., Osaka Pref. Univ., Japan, [4]RIKEN Cluster for Sci. and Technol. Hub Compass to Health Life Res. Complex Program, Japan, [5]Dept. of Fac. of Nutr., Kobe Gakuin Univ., Japan

PB1017 Protein engineering of CYP105A1 to produce active forms of vitamin D

Teisuke Takita[1], Yuya Yogo[2], Kaori Yasuda[3], Hiroshi Sugimoto[4], Yoshitsugu Shiro[4], Shinichi Ikushiro[2], Sho Nemoto[1], Ren Ohashi[1], Moeka Wada[1], Kiyoshi Yasukawa[1], Toshiyuki Sakaki[3]

[1]Div. of Food Sci. and Biotechnol., Grad. Sch. of Agric., Kyoto Univ., Japan, [2]Dept. of Biotechnol., Fac. of Engineer., Toyama Pref. Univ., Japan, [3]Dept. of Pharm. Engineer., Fac. of Engineer., Toyama Pref. Univ., Japan, [4]RIKEN SPring-8 Cent., Japan

PB1018 Vitamin D supplementation protects against cerebral ischemia/reperfusion injury in Sprague-Dawley rats

Chi-Hao Wu[1,2], Ming-Ya Kung[2], Hsiao-En Tai[1]

[1]Grad. Program of Nutr. Sci., Natl. Taiwan Normal Univ., Taiwan, [2]Sch. of Nutr. and Health Sci., Taipei Medical Univ., Taiwan

B) Food Factors: Others

PB1101 Analysis of food-derived nucleic acids and their effects on claudin-4 mRNA expression in differentiated Caco-2 models

Naomi Abe-Kanoh[1], Erika Nuka[1], Mao Aoki[2], Kotono Minami[2], Miyuki Uemura[2], Hirotaka Sekiguchi[3], Keita Sutoh[3], Koji Usumi[3], Kohta Ohnishi[1], Yoshichika Kawai[1]

[1]Inst. of Biomed. Sci., Tokushima Univ. Grad. Sch., Japan, [2]Sch. of Med. Nutr., Tokushima Univ., Japan, [3]R&D Planning and Administration Dept., Life Sci. Inst. Co. Ltd., Japan

PB1102 Characterization of glucosyl rebaudioside a produced by dextransucrase from *Leuconostoc lactis*

Hyejin Kang, Ha-Nul Lee, So-Hyeon Lee, Young-Min Kim

Dept. of Food Sci. and Technol., Chonnam Natl. Univ., Korea

PB1103 The green tea polyphenol epigallocatechin-3-gallate attenuates age-associated muscle loss via regulation of myostatin and miR-486

Shu-Hui Hu[2,3], Ming-Yi Liu[4], Yun-Ching Chang[1,5], Sue-Joan Chang[1]

[1]Dept. of Life Sci., Natl. Cheng Kung Univ., Taiwan, [2]Dept. of Med. Lab. Sci. and Biotechnol.,[3]Dept. of Med. Res., Kaohsiung Med. Univ. Hosp., Taiwan, [4]Dept. of Long Term Care, Wu Feng Univ., Taiwan, [5]Dept, of Nursing, Shu-Zen Coll. of Med. and Management, Taiwan

PB1104 Quality evaluation and stabilized of food-grade microemulsions with the evening primrose oil

Hong-Yan Wu, Qi-An, Xiu-Xin Li, De-Cong Zhang, Ying-Yi Xu

Coll. of Food and Biol. Eng., Qiqihar Univ., China

PB1105 α-Monoglucosyl hesperidin but not hesperidin induces brown-like adipocyte formation and suppresses white adipose tissue accumulation in mice

Takuma Hyodo[1], Sho Nishikawa[1], Tsubasa Nagao[1], Akihito Nakanishi[2], Mahamadou Tandia[2], Takanori Tsuda[1]

[1]Coll. of Biosci. and Biotechnol., Chubu Univ., Japan, [2]Toyo Sugar Refining Co., Ltd., Japan

PB1106 Loss of key components, methylglyoxal and 2′-methoxyacetophenone, in manuka honey by heat processing

Yui Kishi[1], Masaki Kawai[1], Yayako Okano[1], Naoko Suga[1], Mai Kato[2], Akika Nagata[2], Noriyuki Miyoshi[2], Yoji Kato[1,3]

[1]Sch. of Human Sci. Enviro., Univ. of Hyogo, Japan, [2]Sch. of Food Nutri. Sci., Univ. of Shizuoka, Japan, [3]Res. Inst. for Food Nutri. Sci., Univ. of Hyogo, Japan

PB1107 Vegetable nitrate intake is associated with better memory and lower risk of depression: The AusDiab study

Catherine P. Bondonno[1,2], Lauren Blekkenhorst[1,2], Nicola P. Bondonno[1,2], Marc Sim[1,2], Simone Radavelli Bagatini[1], Kevin D. Croft[3], Dianna J. Magliano[4], Jonathan E. Shaw[4], Kaarin J. Anstey[5], Robin M. Daly[6], Joshua R. Lewis[1,2,7], Jonathan M. Hodgson[1,2]

[1]Sch. of Medical and Health Sci., Edith Cowan Univ., Australia, [2]Med. Sch., Univ. of Western Australia, Australia, [3]Sch. of Biomed. Sci., Univ. of Western Australia, Australia, [4]Clin. and Population Health Res., Baker Heart and Diabetes Inst., Australia, [5]Fac. of Sci., Univ. of New South Wales, Australia, [6]Sch. of Exercise and Nutr. Sci., Deakin Univ., Australia, [7]Centre for Kidney Res., Children's Hosp. at Westmead, Sch. of Public Health, Australia

PB1108 Functionality assessment of dried persimmon fruits and persimmon-derived tannins

Yoko Matsumura[1,2], Shin-ichi Kayano[1], Noriko Ouji-Sageshima[2], Naoko Mochida[3], Masahiro Kitabatake[2], Toshihiro Ito[2]

[1]Dept. of Nutr., Fac. of Health Sci., Kio Univ., Japan, [2]Dept. of Immunol., Nara Med. Univ., Japan, [3]Dept. of Food Sci. & Nutr., Grad. Sch. of Humanities & Sci., Nara Women's Univ., Japan

C) Functions and Mechanisms: Allergy and Immune Modulation

PC0101 Immunostimulatory effects of subcritical water extract of *Gnoderma*

Koji Hattori[1], Hiroshi Takagi[1], Yuichiro Ogata[1], Takaaki Yamada[1], Kousuke Fukata[1], Tsutomu Sakaida[1], Youichi Yashiro[1], Seiji Hasegawa[1,2], Satoru Nakata[1], Hiroyuki Tanaka[3]

[1]Res. Lab., Nippon Menard Cosmetic Co., Ltd., Japan, [2]Ngoya Univ. -MENARD Collaborative Res. Chair, Nagoya Univ. Grad. Sch. of Med., Japan, [3]Lab. of Pharma., Dept. of Bioactive Mol., Gifu Pharma. Univ., Japan

PC0102 Combination of glucan and vegetable soup demonstrates synergistic effects on the immune system in murine

Ha-Nul Lee[1], Ji-Yeon Park[2], Joo-Hee Choi[2], Jong-Hwan Park[2], Young-Min Kim[1]

[1]Dept. of Food Sci. and Technol., Chonnam Natl. Univ., Korea, [2]Lab. Animal Med., Coll. of Vet. Med. and BK21 Plus Project Team, Chonnam Natl. Univ., Korea

PC0103 Role of CCL28 on the development and immunological function of thymus and spleen in mouse

Miho Takahashi[1], Chihiro Yamamoto[1], Tsuyoshi Koide[2], Kazuto Yoshimi[3], Kazutoshi Sayama[1,4]

[1]Shizuoka Univ., Japan, [2]Mouse Genomics Res., Japan, [3]Nat. Ins. Genetics, Grad. Sch. of Med, Osaka Univ., Japan, [4]Coll. of Agric., Academic Inst., Shizuoka Univ., Japan

PC0104 The role of CCL28 on the development of Peyer's patches in mouse

Maho Tange[1], Taito Fukuhara[1], Tsuyoshi Koide[2], Kazuto Yoshimi[3], Kazutoshi Sayama[1,4]

[1]Grad. Sch. of Agric., Shizuoka Univ., Japan, [2]Mouse genomics Res., Japan, [3]Nat. Ins. Genetics, Grad. Sch. of Med, Osaka Univ., Japan, [4]Coll. of Agric., Academic Inst., Shizuoka Univ., Japan

PC0105 Effect of *Echinacea purpurea* extracts on allergic reaction in mast cells

Anuu Zorig[1], Rine Toko[1], Enkhtsetseg Sukhbold[1], Mikako Takasugi[2], Hirofumi Arai[1]

[1]Dept. of Biotechnol. Environ. Chem., Kitami Inst. of Technol., Japan, [2]Dept. of Life Sci., Kyushu Sangyo Univ., Japan

PC0106 Anti-allergic effects of docosahexaenoyl ethanolamide (DHEA), a metabolite of docosahexaenoic acid (DHA)

Yoshiki Kanayama[1], In-Hae Kim[1], Takuya Sugahara[1,2], Kosuke Nishi[1,2]

[1]Dept. of Biosci., Grad. Sch. of Agric., Ehime Univ., Japan, [2]Food Health Sci. Res. Ctr., Ehime Univ., Japan

PC0107 Inhibition of degranulation by phospholipids derived from green asparagus

Hiroshi Hamajima[1], Akira Iwamoto[2], Keisuke Tsuge[2], Yumi Tsuruta[2], Hiroaki Yotsumoto[3], Teruyoshi Yanagita[1,3]

[1]Saga Food and Cosmetics Lab., Div. of Res. and Dev. Promotion, Saga Regional Ind. Support Cent., Japan, [2]Div. of Food Ind., Industrial Technol. Cent. of Saga, Japan, [3]Dept. of Health and Nutr. Sci., Fac. of Health and Nutr. Sci., Nishikyushu Univ., Japan

PC0108 Suppression of leukotrienes release from mast cells by lysophosphatidylcholine derived from squid and starfish

Mikako Takasugi[1], Shogo Kakoi[1], Shintaro Yasutake[1], Hirofumi Arai[2]

[1]Dept. of Life Sci., Kyushu Sangyo Univ., Japan, [2]Dept. of Biotechnol. Environ. Chem., Kitami Inst. of Technol., Japan

PC0109 Intake of collagen peptide ameliorates immune status –Randomized placebo-controlled double-blind trial–

Kumiko Kuwaba[1], Yoh-ichi Koyama[1,3], Yukihiro Tsukada[2], Masashi Kusubata[1], Kazunori Mizuno[1]

[1]Res. Inst. of Biomatrix, Nippi Inc., Japan, [2]Gelatin Div., Nippi Inc., Japan, [3]Inst. for Animal Reprod., Japan

PC0111 Antiallergic effect of white rice on experimental allergic rhinitis model in mice

Yukio Sugimoto[1], Atsushi Ogura[1], Hisanori Kobara[2], Yasutune Maruyama[3], Hideyuki Ito[4]

[1]Dept. of Pharma. Sci., Grad. Sch. of Med., Dent. and Pharma. Sci., Okayama Univ., Japan, [2]Nat. Fed. Agric. Co. Assoc. Okayama Pref. HQ., Agric. Prod. Div., Japan, [3]Okayama Pref. Gov. Agri. Market Promotion Sec., Japan, [4]Dept. of Nutr. Sci., Grad. Sch. of Health and Welfare Sci., Okayama Pref. Univ., Japan

C) Functions and Mechanisms: Anti-inflammation

PC0201 Screening of microsomal prostaglandin E synthase-1 inhibitor from food ingredients

Asako Tamenobu, Keisuke Toda, Izumi Tsukayama, Yuka Konoike, Yuki kawakami, Yoshitaka Takahashi, Toshiko Suzuki-Yamamoto

Dept. of Nutr. Sci., Okayama Pref. Univ., Japan

PC0202 Red rice proanthocyanidin inhibits 5-lipoxygenase and exhibits therapeutic effect on psoriasis

Keisuke Toda[1], Yuki Nagasaki[1], Izumi Tsukayama[1], Asako Tamenobu[1], Yuka Konoike[1], Natsuki Ganeko[1], Hideyuki Ito[1], Yuki Kawakami[1], Yoshitaka Takahashi[1], Yoshimi Miki[2], Kei Yamamoto[3], Makoto Murakami[2], Toshiko Suzuki-Yamamoto[1]

[1]Dept. of Nutr. Sci., Okayama Pref. Univ., Japan, [2]CDBIM, Grad. Sch. of Med., Univ. of Tokyo, Japan, [3]Grad. Sch. of Technol., Ind. Social Sci., Tokushima Univ., Japan

PC0203 Anti-inflammatory effect of ellagitannins present in immature fruit of boysenberry

Masaki Kawai[1], Asami Hanamura[1], Kino Hyodo[1], Reiji Nakanishi[1], Naoko Hiramatsu[2], Noriyuki Miyoshi[3], Yoji Kato[1,2]

[1]Sch. of Human Sci. Enviro., Univ. of Hyogo, Japan, [2]Res. Inst. for Food Nutr. Sci., Univ. of Hyogo, Japan, [3]Sch. of Food Nutr. Sci., Univ. of Shizuoka, Japan

PC0204 Pterostilbene exerts immunosuppressive effects through T cells and dendritic cells

Takuya Yashiro, Shiori Yura, Akari Tobita, Yuki Toyoda, Chiharu Nishiyama

Dept. of Biol. Sci. Tech., Fac. Ind. Sci. Tech., Tokyo Univ. Sci., Japan

PC0205 The effects of diallyl trisulfide derived from garlic on NF-κB signaling in macrophage

Hirona Morishita[1], Sachiko Okue[1], Yori Ozaki-Masuzawa[2], Takashi Hosono[1,2], Taiichiro Seki[1,2]

[1]Dept. of Appl. Life Sci., Nihon Univ. Grad. Sch. of Bioresour. Sci., Japan, [2]Dept. of Chem. and Life Sci., Coll. of Bioresour. Sci., Nihon Univ., Japan

PC0206 Immunomodulating effects of extracts from *Lactobacillus casei* and *gasseri* –Anti-inflammatory effects on macrophage differentiation–

Reika Ando[1], Tomoo Taniguchi[2], Saori Tomita[1], Ken-ichiro Minato[1]

[1]Dept. of Appl. Biol. Chem., Meijo Univ., Japan, [2]Aichi-yoke Co., Ltd., Japan

PC0207 The skin-protective effects of honeybush extracts

Kaho Shiraishi[1], Elizabeth Joubert[2], Christiaan Malberbe[2], Yutaka Miura[1]

[1]Tokyo Univ. of Agric. & Technol., Japan, [2]Agric. Res. Council, South Africa

PC0208 Oligosaccharides from agar extends the lifespan of *Caenorhabditis elegans*

Natsumi Desaka[1], Hitomi Nishikawa[1], Katsura Mizushima[2], Tomohisa Takagi[2], Yuji Naito[2], Yasuki Higashimura[1,2]

[1]Dept. of Food Sci., Ishikawa Pref. Univ., Japan, [2]Div. of Mol. Gastroenterol. Hepatol., Grad. Sch. of Med. Sci., Kyoto Pref. Univ. of Med., Japan

PC0209 (-)-Epicatechin-3-gallate ameliorates sepsis-induced acute organ injuries and mortality via upregulation of Nrf2-regulated antioxidant effects

Yi-Shiou Chiou[1,2], Yike Jiang[2,3], Chi-Tang Ho[3], Min-Hsiung Pan[1]

[1]Inst. of Food Sci. and Technol., Natl. Taiwan Univ., Taiwan, [2]Tsinghua Berkeley Shenzhen Inst. (TBSI), Tsinghua Univ., China, [3]Dept. of Food Sci., Rutgers Univ., USA

PC0210 Downregulating of pro-inflammatory mediators in particulate matter 2.5 um (PM2.5)-stimulated RAW 264.7 cells by ethanol extract of Moringa seed

Yu-Wen Liu[1], Shwu-Ling Peng[2], Chia-Jui Weng[1]

[1]Dept. of Living Services Ind., Tainan Univ. of Technol., Taiwan, [2]Inst. of Med., Chung Shan Med. Univ., Taiwan

C) Functions and Mechanisms: Autophagy

PC0301 Structure-activity relationship in programmed cell death induction mechanism of terpenes

Kanako Chazono[1], Taichi Hara[2], De-xing Hou[1,3], Kozue Sakao[1,3]

[1]Dept. of Food Sci. and Technol., Grad. Sch. of Agric. Forest. and Fish., Kagoshima Univ., Japan, [2]Fac. of Human Sci., Waseda Univ., Japan, [3]The United Grad. Sch. of Agric. Sci., Kagoshima Univ., Japan

PC0302 Elucidation of the molecular mechanism underlying lysosomal activation in J774.1 cells by isorhamnetin treatment

Maiko Sakai[1], Kohta Ohnishi[2], Masashi Masuda[2], Hirokazu Ohminami[2], Hisami Yamanaka-Okumura[2], Taichi Hara[3], Yutaka Taketani[2]

[1]Grad. Sch. of Nutr. and Biosci., Tokushima Univ., Japan, [2]Inst. of Biomed. Sci., Tokushima Univ., Japan, [3]Fac. of Human Sci., Waseda Univ., Japan

C) Functions and Mechanisms: Bioavailability and Metabolism

PC0401 Evaluation of the absorption and organ distribution of 1-deoxynojirimycin in rat

Toshiyuki Kimura[1], Soo Takasu[2], Fukuyo Tanaka[3], Kenji Yamagishi[1], Teruo Miyazawa[4], Kiyotaka Nakagawa[2]

[1]Food Res. Inst., Nat. Agric. Res. Org. (NARO), Japan, [2]Dept. of Appl. Bioorg. Chem., Grad. Sch. of Agric. Sci., Tohoku Univ., Japan, [3]Centr. Reg. Agric. Res. Cent., Nat. Agric. Res. Org. (NARO), Japan, [4]New Ind. Creation Hatch. Cent. (NICHe), Tohoku Univ., Japan

PC0402 Theasinensin A promotes paracellular transport of hesperidin in Caco-2 cell

Chizumi Abe[1], Naoto Ohno[1], Shu-wei Huang[1], Alexia Nectoux[1], Haruo Ymamura[2], Toshiro Matsui[1]

[1]Fac. of Agric., Grad. Sch. of Kyushu Univ., Japan, [2]Charle Co., Japan

PC0403 Study of the curcumin metabolism by human intestinal bacteria

Toshio Niwa[1], Shin-ichiro Yokoyama[2], Mika Mochizuki[3], Toshihiko Osawa[3]

[1]Fac. of Health Nutr., Shubun Univ., Japan, [2]Gifu Pref. Res. Inst. for Food Sci., Japan, [3]Fac. of Psychol. and Physical Sci., Aichi Gakuin Univ., Japan

PC0404 Intestinal absorption of visualized anthocyanins in rats by matrix assisted laser desorption/ionization mass spectrometry imaging technique

Taehun Ham[1], Huu-Nghi Nguyen[1], Mitsuru Tanaka[1], Ayaka Tsutsumi[2], Qing Qiang Hu[2], Koichi Aizawa[2], Toshiro Matsui[1]

[1]Div. of Biores. Bioenviro. Sci., Grad. Sch. of Agric. Sci., Kyushu Univ., Japan, [2]Res. and Dev., Kagome Inc., Japan

PC0405 Enhanced absorption of prenylated isoflavones in rat circulating bloodstream

Ye Zhang[1], Kazuhiro Takao[1], Kuni Sasaki[2], Kouji Ochiai[2], Toshiro Matsui[1]

[1]Div. Biores. Bioenvir. Sci., Grad. Sch. of Agric. Kyushu Univ., Japan, [2]Daizu Energy Co. Ltd., Japan

PC0406 Pharmacokinetics and metabolism of components in Brazilian green propolis after oral administration in humans

Masayuki Yamaga[1,2], Hiroko Tani[2], Manamu Kitami[3], Shin-ichi Ikushiro[3], Kaeko Murota[4]

[1]Appl. Bioresour Chem., Bioresour and Life Sci., The United Grad. Sch. of Agric. Sci., Tottori Univ., Japan, [2]Inst. for Bee Products and Health Sci., Yamada Bee Co. Inc., Japan, [3]Dep. Biotech., Fac. Engineer, Toyama Pref. Univ., Japan, [4]Dept. Life Sci., Fac. Life Environ. Life Sci., Shimane Univ., Japan

PC0407 Yuzu (*Citrus junos* Sieb.ex Tanaka) peel extract can help prevent fatty liver disease induced by high sucrose diet in rats

Ayako Suzuki[1], Miki Umeki[2], Kaoru Nobuoka[3], Satoshi Mochizuki[1], Yuichi Ishikawa[1]

[1]Fac. of Sci. and Technol., Oita Univ., Japan, [2]Dept. of Food Sci. and Hum. Nutr., Beppu Univ., Japan, [3]Fac. of Educ., Oita Univ., Japan

PC0408 Enzymatic synthesis of conjugate metabolites of stilbene compounds using xenobiotic metabolizing enzymes expressing yeast

Mai Nakayama, Miyu Nishikawa, Keisuke Fukaya, Daisuke Urabe, Kaori Yasuda, Toshiyuki Sakaki, Shinichi Ikushiro

Dep. of Biotech., Fac. of Eng., Toyama Pref. Univ., Japan

PC0409 Biosynthesis of methyl flavonoids using genetically engineered yeast cells with human catechol-*O*-methyltransferase

Yuuka Masuyama[1], Miyu Nishikawa[1], Kaori Yasuda[2], Toshiyuki Sakaki[2], Shinichi Ikushiro[1]

[1]Dep. of Biotech., Fac. of Eng., Toyama Pref. Univ., Japan, [2]Dep. of Pharm., Fac. of Eng., Toyama Pref. Univ., Japan

C) Functions and Mechanisms: Bone Health

PC0501 Analysis of improvement mechanism of abnormalities in bone metabolism by fatty acid metabolites produced by lactic acid bacteria

Mayu Kikuchi[1], Yusuke Itoh[1], Ryuji Ohue-Kitano[2], Rie Katsumata-Tsuboi[1], Miori Tanaka[1], Hirofumi Inoue[1], Shigenobu Kishino[3], Tsuyoshi Goto[3], Teruo Kawada[3], Ikuo Kimura[2], Jun Ogawa[3], Nobuyuki Takahashi[1], Mariko Uehara[1]

[1]Grad. Sch. of Agric., Tokyo Univ. of Agric., Japan, [2]Grad. Sch. of Agric., Tokyo Univ. of Agric. and Technol., Japan, [3]Grad. Sch. of Agric., Kyoto Univ., Japan

PC0502 Collagen-derived dipeptide prolyl hydroxyproline directly binds to Foxg1 to change its conformation and inhibit the interaction with Runx2

Kaho Nomura[1], Yoshifumi Kimira[1], Yoshihiro Osawa[1], Jun Shimizu[1], Aya Kataoka-Matsushita[1,2], Hiroshi Mano[1]

[1]Fac. of Pharma. Sci., Josai Univ., Japan, [2]Nitta Gelatin Inc., Japan

PC0503 Collagen-derived dipeptide prolyl-hydroxyproline promotes differentiation of MC3T3-E1 osteoblastic cells

Yoshifumi Kimira[1], Yoshihiro Osawa[1], Kaho Nomura[1], Aya Matsushita[2], Naoki Inoue[2], Sachie Nakatani[1], Jun Shimizu[1], Masahiro Wada[1], Hiroshi Mano[1]

[1]Fac. of Pharma. Sci., Josai Univ., Japan, [2]Nitta Gelatin Inc., Japan

PC0504 Salmon cartilage proteoglycan prevents degradation of the bone quality in ovariectomized rats

Hiroyuki Nozaka[1], Erika Ozaki[1], Toshiya Nakamura[2], Ikuko Kakizaki[1], Masashi Goto[2], Yutaka Suekawa[2], Kazushi Yamamoto[2], Yoji Kato[1]

[1]Grad. Sch. of Health Sci., Hirosaki Univ., Japan, [2]Sunstar. INC, Japan

PC0505 The effectivity of difructose anhydride III (DFA III) to increase absorption of calcium in rat femur bone of calcium deficient model

Ainia Herminiati[1], Rimbawan[2], Budi Setiawan[2], Dewi Apri Astuti[3], Linar Zalinar Udin[4], Sri Pudjiastuti[4]

[1]Res. Cent. for Appropriate Technol., Indonesian Inst. of Sci., Indonesia, [2]Dept. of Community Nutr., Fac. of Human Ecol., IPB Univ., Indonesia, [3]Dept. of Nutr. and Feed Technol., Fac. of Animal Sci., IPB Univ., Indonesia, [4]Res. Cent. for Chem., Indonesian Inst. of Sci., Indonesia

PC0506 High cholesterol diet-induced bone loss is primarily due to elevated osteoclastogenesis in mice

O. J. Sul[1], J. H. Suh[2], H. S. Choi[1]

[1]Dept. of Biological Sciences Univ. of Ulsan, Korea, [2]Dept. of Pathol, Ulsan Univ. Hosp., Korea

C) Functions and Mechanisms: Brain Health

PC0601 Improvement effects of subcritical water extract of Ganoderma on cognitive function

Tomohiro Matsumoto[1], Hiroshi Takagi[1], Kousuke Fukata[1], Tsutomu Sakaida[1], Youichi Yashiro[1], Seiji Hasegawa[1,2], Satoru Nakata[1], Hiroyuki Tanaka[3]

[1]Res. Lab., Nippon Menard Cosmetic Co., LTD., Japan, [2]Nagoya Univ. -MENARD Collaborative Res. Chair, Nagoya Univ. Grad. Sch. of Med., Japan, [3]Lab. of Pharma., Dept. of Bioactive Mol., Gifu Pharmaceutical Univ., Japan

PC0602 α-Lipoic acid enhances phagocytosis of oligomeric β-amyloid1-42 into BV-2 mouse brain microglia cells via ameliorating CD36 pathway

Szu-Chuan Shen[1], You-Wei Chang[1], Wen-Chang Chang[2], James Swi-Bea Wu[3]

[1]Grad. Program of Nutr. Sci., Natl. Taiwan Normal Univ., Taiwan, [2]Dept. of Food Sci., Natl. Chiayi Univ., Taiwan, [3]Grad. Inst. of Food Sci. and Technol., Natl. Taiwan Univ., Taiwan

PC0603 All tyrosine-containing dipeptides have distinct effects on brain function

Takashi Ichinose[1], Shigeki Furuya[1,2]

[1]Dept. of Biosci. and Biotech., Grad. Sch. of Biores. and Bioenv., Kyushu Univ., Japan, [2]Innovative Bio-Architecture Cent., Fac. of Agr., Kyushu Univ., Japan

PC0604 Neuroprotective effect of *Spirulina maxima* in HT22 cells

Yelim Son[1], Hyeonwoo Lee[1], Choong Je Ma[1,2]

[1]Dept. of Med. Biomaterials Eng., Coll. of Biomed. Sci., Kangwon Natl. Univ., Korea, [2]Inst. of Biosci. and Biotechnol., Kangwon Natl. Univ., Korea

PC0605 Improvement of cognitive and spatial learning ability of *Corchorus olitorius L.*in Amnesia mice

Yelim Son[1], Hyeonwoo Lee[1], Choong Je Ma[1,2]

[1]Dept. of Med. Biomaterials Eng., Coll. of Biomed. Sci., Kangwon Natl. Univ., Korea, [2]Inst. of Biosci. and Biotechnol., Kangwon Natl. Univ., Korea

PC0606 Holy basil improves cognition and neurodegeneration in animal model of menopause with obesity

Suparporn Muchimapura[1,2], Jintanaporn Wattanathorn[1,2], Waraporn Mahasap[1]

[1]Res. Inst. For HHP&HP, Khon Kaen Univ., Thailand, [2]Physiol. Dept, Fac. Med, Khon Kaen Univ., Thailand

PC0607 Fish oil ameliorates cognitive impairment by suppressing hippocampal inflammation and amyloid-β deposition

Sachiko Okue[1], Mai Takahashi[2], Riku Orihara[2], Eimi Ishikawa[2], Ayako Ueno[2], Takashi Saito[3], Takaomi C. Saido[3], Yori Ozaki-Masuzawa[2], Takashi Hosono[1,2], Taiichiro Seki[1,2]

[1]Dept. of Appl. Life Sci., Grad. Sch. of Biores. Sci., Nihon Univ., Japan, [2]Dept. of Chem. and Life sci., Coll. of Biores. Sci., Nihon Univ., Japan, [3]RIKEN Cent. for Brain Sci., Japan

PC0608 An adequate amount of high-fat diet improves stress-induced social avoidance behavior

Airi Otsuka[1], Tetsuya Shiuchi[2]

[1]Dept. of Life Sci., Kindai Univ., Japan, [2]Dept. Integ. Physiol., Inst. Biomed. Sci., Tokushima Univ. Grad. Sch., Japan

PC0609 Peptides from hydrolysate of lantern fish (*Benthosema pterotum*) against oxidative stress induced neurotoxicity on human neuroblastoma SH-SY5Y cells *in vitro*

Huey-Jine Chai[1], Chang-Jer Wu[3], Po-Hsuan Chen[1], June-Ru Chen[2], Bonnie Sun Pan[3]

[1]Seafood Technol. Div.,Fish. Res. Inst., Council of Agric., Taiwan, [2]Fish. Res. Inst., Council of Agric., Taiwan, [3]Dept. of Food Sci., Natl. Taiwan Ocean Univ., Taiwan

PC0610 β-Lactolin, a novel whey-derived peptide, improves memory retrieval in a clinical trial and prevents Alzheimer's disease in preclinical studies

Yasuhisa Ano[1,2], Rena Ohya[1], Masahiro Kita[1], Satoshi Umeda[3], Hiroyuki Nakayama[2]

[1]Res. Lab. for Health Sci and Food Tech., Kirin Holdings, Japan, [2]Grad. Sch. of Agric. and Life Sci., the Univ. of Tokyo, Japan, [3]Dep. Psychol., Keio Univ., Japan

PC0611 Effect of lactononadecapeptide derived from casein hydrolysate on memory in healthy adults

Asako Kusumi[1], Kazuhito Ohsawa[1], Koki Sato[1,2], Yasunori Nakamura[1], Satoshi Miyata[3], Kotaro Hashimoto[3], Kohei Seki[3], Ryuzo Hanada[4], Masato Abe[5]

[1]Core Technol. Lab., Asahi Quality and Innovations, Ltd., Japan, [2]Products Dev. Dept., Asahi Calpis Wellness Co., Ltd., Japan, [3]Res. and Dev. Headquarters, Asahi Group Foods, Japan, [4]Souseikai Sumida Hosp., Japan, [5]Sakura Life Clinic, Japan

PC0612 Effects of pork protein oxidation on redox status, inflammation and learning and memory gene expression in the hippocampus of mice

Bowen Li[1,2], Yueting Ge[2], Shiman Lin[2], Yuge Jiang[2], Le Han[2], Yonghui Shi[1,2], Guowei Le[1,2]

[1]The State Key Lab. of Food Sci. and Technol., Jiangnan Univ., China, [2]Cent. for Food Nutr. and Functional Food Eng., Sch. of Food Sic. and Tech. Jiangnan Univ., China

PC0613 Protective effects of tangeretin and its derivatives against methylglyoxal-induced cytotoxicity in human neuroblastoma SH-SY5Y cells

Yue-Jhu Chen[1], Yun-Xuan Zhang[1], Yi-Lin Zheng[1], Chi-Tang Ho[2], Hui-Yun Tsai[3], Yu-Kuo Chen[1,4]

[1]Dept. of Food Sci., Natl. Pingtung Univ. of Sci. and Technol., Taiwan, [2]Dept. of Food Sci., Rutgers Univ., USA, [3]Dept. of Nutr. and Health Sci., Fooyin Univ., Taiwan, [4]Executive Master of Food Biotechnol., Natl. Pingtung Univ. of Sci. and Technol., Taiwan

PC0614 *In vivo* study of the protective activity of α-tocotrienol against methylglyoxal-induced Alzheimer-like cognitive impairment

Fang-Yu Lin[1], Han-Wei Liao[1], Yun-Xuan Zhang[1], Chung S. Yang[2], Yu-Kuo Chen[1], Hui-Yun Tsai[3]

[1]Dept. of Food Sci., Natl. Pingtung Univ. of Sci. and Technol., Taiwan, [2]Dept. of Chemi. Biol., Rutgers Univ., USA, [3]Dept. of Nutr. and Health Sci., Fooyin Univ., Taiwan

PC0615 Effect of Maillard reaction products derived from dried tomato on *C. elegans* lifespan

Bagoudou Abdel Fawaz [1], Kanako Matsumoto[1], Supatta Chawalitpong[1], Hyun Young Park[2], Dhiraj A. Vattem[2], Soichiro Nakamura[1], Shigeru Katayama[1,3]

[1]Dept. of Agric., Grad. Sch. of Sci. Tech., Shinshu Univ., Japan, [2]Edison Biotech. Inst., Ohio Univ., USA, [3]Div. of Biomol. Innov, Biomed. Inst., Shinshu Univ., Japan

C) Functions and Mechanisms: Cancer Chemoprevention

PC0701 Alkaline hydrolysates of ginseng extract to enhance cancer chemoprevention activity

Wei-Sheng Lin[1], Nai-Wen Mei[2], Min-Hsiung Pan[1]

[1]Inst. of Food Sci. and Technol., Natl. Taiwan Univ., Taiwan, [2]GINCARE Int'l Enterprises Co., Ltd., Taiwan

PC0702 ADA-07 suppresses solar ultraviolet-induced skin carcinogenesis by directly inhibiting TOPK

Qiushi Wang, Tianshun Zhang, Ge Gao, Zigang Dong

The Hormel Inst., Univ. of Minnesota, USA

PC0703 Effects of carnosine on colon carcinogenesis in mice

Jia-Huei Li[1], Hsin-Ying Kuo[1], Ya-Ting Chen[2], Chih-Chung Wu[3], Shu-Ling Hsieh[1]

[1]Dept. of Seafood Sci., Natl. Kaohsiung Univ. of Sci. and Technol., Taiwan, [2]Coll. of Hydrosphere Sci., Natl. Kaohsiung Univ. of Sci. and Technol., Taiwan, [3]Dept. of Food and Nutr., Providence Univ., Taiwan

PC0704 Anticancer activity in Indian Ayurvedic herb, Ashwagandha: Computational and experimental evidence

Sunil Kaul[1], Yue Yu[1], Jaspreet Kaur Dhanjal[1], Durai Sundar[2], Renu Wadhwa[1]

[1]DAILAB, Natl. Inst. Adv. Ind. Sci. Tech. (AIST), Japan, [2]DAILAB, Dept. of Biochem. Eng. and Biotechnol., Indian Inst. of Technol. (IIT) Delhi, India

PC0705 Honey bee propolis: Functional characterization and mechanism of action of anticancer and anti-stress activities

Renu Wadhwa[1], Priyanshu Bhargava[1], Ashish Kaul[2], Yoshiyuki Ishida[3], Keiji Terao[3] Sunil Kaul[1]

[1]DAILAB, Natl. Inst. Adv. Ind. Sci. Tech. (AIST), Japan, [2]Univ. of Tsukuba, Japan, [3]CycloChem Co., Ltd., Japan

PC0706 Antimutagenicity of *Phyllanthus emblica* fruit extract and its partially purified fractions in *Salmonella* mutation assay

Chonikarn Singai[1], Romteera Kitichaiworakul[1], Charatda Punvittayagul[2,3], Rawiwan Wongpoomchai[1,3]

[1]Dept. of Biochem., Fac. of Med., Chiang Mai Univ., Thailand, [2]Res. Affairs, Fac. of Vet. Med., Chiang Mai Univ., Thailand, [3]Func. Food Res. Cen. for Well-being, Chiang Mai Univ., Thailand

PC0707 Synergistic chemopreventive effects of mixed sesame and orange seed extract of on diethylnitrosamine-induced hepatocarcinogenesis in rats

Napaporn Khuanphram[1], Prachya Kongtawelert[1], Arpamas Charikornkul[1], Rawiwan Wongpoomchai[1,2]

[1]Dept. of Biochem., Fac. Med., Chiang Mai Univ., Thailand, [2]Func. Food Res. Cen. Well-Being, Chiang Mai Univ., Thailand

PC0708 Curcumin may suppress cancer cell proliferation through ATP depletion

Ayako Furukawa, Satoki Suihara, Rina Takuwa, Akari Ishisaka, Akira Murakami

Dept. of Food Sci. and Nutr, Sch. of Hum. Sci. and Environ., Univ. of Hyogo, Japan

PC0709 Antioxidant and antiproliferation of young rice leaves (RD6 and BGR)

Visessakseth So[1,3], Wipawee Thukhammee[2,3], Jintanaporn Wattanathorn[2,3], Natthida Weerapreeyakul[3,4]

[1]Grad. Sch. (Pharmaceutical Sci.), Fac. of Pharm. Sci., Khon Kaen Univ., Thailand, [2]Dept. of Physiol., Fac. of Med., Khon Kaen Univ., Thailand, [3]Human High Performance and Health Promotion (HHP&HP) Res. Inst., Khon Kaen Univ., Thailand, [4]Div. of Pharm. Chem., Fac. of Pharm. Sci., Khon Kaen Univ., Thailand

PC0710 Effect of red yeast *(Sporidiobolus pararoseus)* on aflatoxin B1 induced mutagenesis *in vitro* and *in vivo* models

Romteera Kittichaiworakul[1], Sirinya Taya[2], Chonikarn Singai[1], Thanongsak Chaiyaso[3], Rawiwan Wongpoomchai[1,4]

[1]Dept. Biochem., Fac. Med., Chiang Mai Univ., Thailand, [2]Sci. Tech. Res. Inst., Chiang Mai Univ., Thailand, [3]Dept. Biotechnol., Fac. Agro-Ind., Chiang Mai Univ., Thailand, [4]Func. Food Res. Cen. Well-Being., Chiang Mai Univ., Thailand

PC0711 Glutelin and its hydrolysate of color rice bran attenuated formation of preneoplastic lesions in liver and colon of carcinogens initiated rats

Aroonrat Pharapirom[1], Akkasit Jongjareonrak[2], Phatthawin Lengkidworraphiphat[1,3], Kenji Sato[4], Rawiwan Wongpoomchai[1,5]

[1]Dept. of Biochem., Fac. of Med., Chiang Mai Univ., Thailand, [2]Dept. of Food Eng., Fac. of Agro-ind., Chiang Mai Univ., Thailand, [3]Dept of Anim. and Aquat. Sci., Fac. of Agric., Chiang Mai Univ., Thailand, [4]Div. of Appl. Biosci., Grad. Sch. of Agric., Kyoto Univ., Japan, [5]Func. Food Res. Cen. Well-Being, Chiang Mai Univ., Thailand

PC0712 *Lactobacillus fermentum* ameliorates colitis-associated tumorigenesis by modulating gut microbiome

Ya-Chun Chou, Pin-Yu Ho, Min-Hsiung Pan

Inst. of Food Sci. and Technol., Natl. Taiwan Univ., Taiwan

PC0713 A possibility of tocotrienol as a cancer chemopreventative agent in malignant mesothelioma

Kakeru Kono[1,3], Akari Yoshida[3], Momoka Fusegi[1], Daiki Endo[1], Tsunetaka Arai[1], Masako Ota[2,3], Tomohiro Yano[1,3]

[1]Grad. Sch. of Food and Nutr. Sci., Toyo Univ., Japan, [2]Dept. of Nutr. and Health Sci., Toyo Univ., Japan, [3]Res. Inst. for Life Innov., Toyo Univ., Japan

PC0714 Camphorataimide B, a synthesized maleimide derivative, induces apoptosis in human hepatocellular carcinoma cells

Yun-Ching Chang[1], Dai-Jung Chung[2], Chau-Jong Wang[1]

[1]Dept. of Health Diet and Ind. Manage., Health Care and Manage. Coll., Chung Shan Med. Univ., Taiwan, [2]Inst. of Biochem., Microbiol. and Immunol., Med. Coll., Chung Shan Med. Univ., Taiwan

PC0715 The physiological activities of microalgae –Focusing on radical scavenging activity and cytotoxicity against cancer cells–

Akihiro Ohara[1,2], Daisuke Betto[1], Mafumi Kawamura[2], Yuji Yamaguchi[3], Ken-ichiro Minato[1,2], Hiroyuki Takenaka[3]

[1]Div. of Agric. Sci., Grad. Sch. of Agric, Meijo Univ., Japan, [2]Fac. of Agric., Meijo Univ., Japan, [3]MAC Gifu Res. Inst., Microalgae Co., Japan

PC0716 Anti-metastatic effects and chemical properties of polysaccharides isolated from fermented ginseng leaves

Sue Jung Lee, Hye-Ryung Park, Kwang-Soon Shin

Dept. of Food Sci. and Biotechnol., Kyonggi Univ., Korea

PC0717 Chemopreventive effect of natural dietary compounds on xenobiotic-induced carcinogenesis

Min-Hsiung Pan[1], Chia-Ching Wu[1], Chi-Tang Ho[2]

[1]Inst. of Food Sci. and Technol., Natl. Taiwan Univ., Taiwan, [2]Dept. of Food Sci., Rutgers Univ., USA

PC0718 Chemopreventive efficacy of 3′-hydroxypterostilbene on suppression of high fat diet-induced obesity promotes colitis

Pei-Sheng Lee[1], Yi-Shiou Chiou[1,2], Nagabhushanam Kalyanam[3], Chi-Tang Ho[4], Min-Hsiung Pan[1]

[1]Inst. of Food Sci. and Technol., Natl. Taiwan Univ., Taiwan, [2]Tsinghua Berkeley Shenzhen Insti. (TBSI), Tsinghua Univ., China, [3]Sabinsa Co., USA, [4]Dept. of Food Sci., Rutgers Univ., USA

PC0719 Evaluation of azolato-bridged dinuclear platinum (II) complexes cytotoxicity in human prostate cancer cells

Tasuku Arai[1], Takeshi Matsunaga[1], Maya Kamao[2], Seiji Komeda[3], Yoshihisa Hirota[1]

[1]Dept. Biosci. & Eng., Coll. Syst. Eng. & Sci., Shibaura Inst. Technol., Japan, [2]Ext. Cent., Kobe Pharm. Univ., Japan, [3]Fac. Pharm. Sci., Suzuka Univ. Med. Sci., Japan

PC0720 Anticancer activity and mediation of apoptosis in hepatoma carcinoma cells by ethanolic extract of Djulis and its bioactive compounds

Pin-Der Duh[1], Dom-Gene Tu[2], Chin-Chen Chu[3], Shih-Ying Chen[4], Charng-Cherng Chyau[5], Heuy-Ling Chu[1], You-Chia Wu[4]

[1]Dept. of Food Sci. Tech., Chia Nan Univ. of Pharm. and Sci., Taiwan, [2]Dept. of Nuclear Med., Ditmanson Med. Found., Chia-Yi Christian Hosp. Taiwan, [3]Dept. of Anesthesiol., Chi Mei Med. Cent., Taiwan, [4]Dept. of Health and Nutr., Chia Nan Univ. of Pharm. and Sci., Taiwan, [5]Res. Inst. of Biotechnol., Hungkuang Univ., Taiwan

PC0722 The potential effects/mechanisms and safety study of ent-kaurane diterpenoid extracted from *C. tonkinensis* Gagnep as an anti-lung cancer agent

Yi-Hsuan Huang, Rong-Jane Chen

Dept. of Food Safety / Hygiene and Risk Management, Natl. Cheng Kung Univ. Med. Coll., Taiwan

C) Functions and Mechanisms: Cardiovascular Health

PC0801 Fish oil is more potent than flaxseed oil in modulating gut microbiota and reducing trimethylamine-N-oxide (TMAO)-exacerbated atherogenesis in mice

Zouyan He, Zhen-Yu Chen

Food and Nutr. Sci. Programme, Sch. of Life Sci., The Chinese Univ. of Hong Kong, China

PC0802 Geniposidic acid promotes atrial natriuretic peptide secretion to exhibit the biological effect

Shohei Yamaguchi[1], Ryuto Takahashi[2], Shingo Hosoo[3], Tetsuya Hirata[3], Yasuyo Yamaguchi[3], Hiroo Yamasaki[3], Naoto Minamino[4], Kozo Nakamura[2,5]

[1]Dept. of Sci. and Tech., Grad. Sch. of Med. Sci. and Tech., Shinshu Univ., Japan, [2]Dept. of Agric., Grad. Sch. of Sci. and Tech., Shinshu Univ., Japan, [3]R&D Ctr., Kobayashi Pharmaceutical Co., Ltd., Japan, [4]Omics Res. Ctr., Natl. Cerebral and Cardiovascular Ctr., Japan, [5]Inst. of Agric., Acad. Assy., Shinshu Univ., Japan

PC0803 The effects of sulfuric odors of garlic and thier precursors on HDL-mediated cholesterol efflux from the macrophages

Harumi Uto-Kondo[1], Shiori Kawahara[1], Katsunori Ikewaki[2], Hitomi Kumagai[3]

[1]Dept. of Biosci. in Daily Life, Nihon Univ., Japan, [2]Dept. of Intern. Med., Natl. Def. Med. Coll., Japan, [3]Dept. of Chem. and Life Sci., Nihon Univ., Japan

PC0804 The effects of trigonelline in *Raphanus sativus* cv. Sakurajima Daikon as a functional food for humans

Katsuko Kajiya[1,2], Haruna Kawasoe[2], Maho Sasaki[1], Takashi Kajiya[3], Yoshihiko Atsuchi[3], Nobuhiko Atsuchi[3], Yuji Minami[1,2]

[1]Dept. of Food Sci. & Biotech., Fac. of Agric., Kagoshima Univ., Japan, [2]Grad. Sch. of Agric., Forest. & Fish., Kagoshima Univ., Japan, [3]Dept. of Cardiol., Tenyoukai Cent. Hosp., Japan

PC0805 Anthocyanins derived from purple carrot affect on the hemodynamic changes through adrenomimetic action

Taiki Fushimi[1], Ayaka Tsutsumi[2], Ryo Koizumi[1], Yasuyuki Fujii[1], Qing Qiang Hu[2], Koichi Aizawa[2], Naomi Osakabe[1]

[1]Dept. of Bio-sci. and Eng., Shibaura Inst. of Technol., Japan, [2]Nature and Wellness Res. Dept., Innovation Div., KAGOME Co., Ltd., Japan

PC0806 Purification of Angiotensin I-converting-enzyme inhibitors from a *Chlorella* hot water extract

Kyohei Koseki, Tomohiro Bito, Fumio Watanabe
Grad. Sch. of Sustainability. Sci., Tottori Univ., Japan

PC0807 Sea buckthorn seed oil reduces blood cholesterol and modulates gut microbiota

Wangjun Hao, Zhenyu Chen
Sch. of Life Sci., The Chinese Univ. of Hong Kong, China

PC0808 Effect of peony seed oil on lipid metabolism in hypercholesterolemia hamster

Erika Kwek, Zhen Yu Chen
Sch. of Life Sci., The Chinese Univ. of Hong Kong, China

PC0809 Anti-hypertensive effects of *Pinus densiflora* bark extract in spontaneously hypertensive rats

Kwan Joong Kim[1,2], Eun-Sang Hwang[3], Min-Jeong Kim[1,2], Ji-Ho Park[4], Dae-Ok Kim[1,2]
[1]Dept. of Food Sci. and Biotechnol., Kyung Hee Univ., Korea, [2]Skin Biotechnol. Cent., Kyung Hee Univ., Korea, [3]Dept. of Gerontol., Grad. sch. of East-West Med. Sci., Kyung Hee Univ., Korea, [4]Dept. of East-West Med., Grad. sch. of East-West Med. Sci., Kyung Hee Univ., Korea

PC0810 Djulis hull extracts ameliorate lipid metabolism in hamsters fed a high-fat/high-cholesterol diet

Yu-Yuan Shih[1], Ching-Yi Kuan[1], Pi-Jen Tsai[1], Hui-Yun Tsai[2], Yu-Kuo Chen[1,3]
[1]Dept. of Food Sci., Natl. Pingtung Univ. of Sci. and Technol., Taiwan, [2]Dept. of Nutr. and Health Sci., Fooyin Univ., Taiwan, [3]Food Biotechnol., Natl. Pingtung Univ. of Sci. and Technol., Taiwan

C) Functions and Mechanisms: Chronobiology

PC0901 Dietary fish oil differentially changes serum lipids and gene expression in healthy adults depending on time of feeding

Tatsuya Konishi[1], Yoshinori Takahashi[1], Yasuhiko Shiina[1], Hideaki Oike[2,3], Katsutaka Oishi[3,4,5]
[1]Cent. Res. Inst., Maruha Nichiro Co., Japan, [2]Food Res. Inst., NARO, Japan, [3]Biol. Clock Res. Group, Biomedical Res. Inst., AIST, Japan, [4]Dept. of Computational Biol. and Med. Sci., Grad. Sch. of Frontier Sci., Univ. of Tokyo, Japan, [5]Dept. of Appl. Biol. Sci., Grad. Sch. of Sci. and Technol., Tokyo Univ. of Sci., Japan

PC0902 Inhibitory mechanism of polyphenols for the disruption of circadian clock via AhR

Takuya Nomura[1], Tomoya Kitakaze[2], Yoko Yamashita[2], Hitoshi Ashida[2]
[1]Fac. of Agric., Kobe Univ., Japan, [2]Dept. of Agrobiosci., Grad. Sch. of Agric. Sci., Kobe Univ., Japan

PC0903 Effects of consumption-timing and fat species on body weight gain in C57BL/6 mice

Hiroki Matsuyama[1], Wataru Tanaka[1], Daigo Yokoyama[1], Saki Nishimura[2], Shoji Matsumoto[2], Takashi Sano[2], Takatoshi Yamashita[2], Masanobu Sakono[1], Hiroyuki Sakakibara[1]

[1]Grad. Sch. of Agric., Univ. of Miyazaki, Japan, [2]J-Oil Mills, Inc., Japan

PC0904 Cacao polyphenols regulate the clock gene expressions in mice

Ken-yu Hironao, Shujiao Huang, Yuji Mitsuhashi, Hitoshi Ashida, Yoko Yamashita

Dept. of Agrobiosci., Grad. Sch. of Agric. Sci., Kobe Univ., Japan

PC0905 Diurnal variation of polyphenol amounts in sensitive plant (*Mimosa pudica* L.)

Kanami Ino, Hiroki Matsuyama, Wataru Tanaka, Masanobu Sakono, Hiroyuki Sakakibara

Grad. Sch. of Agric., Univ. of Miyazaki, Japan

C) Functions and Mechanisms: Exercise and Skeletal Muscle Health

PC1001 Inhibitory effect of *Illicium verum* water extract on muscle atrophy through the regulation of protein turnover and myogenesis

Jihee Yoo, Changhee Kim, Jae-Kwan Hwang

Dept. of Biotechnol., Yonsei Univ., Korea

PC1002 Oleamide rescues skeletal muscle atrophy of mice housed in small cages

Yasuyuki Kobayashi[1], Natsumi Watanabe[1], Tomoya Kitakaze[2], Keiichiro Sugimoto[3,4], Kenji Kai[1], Naoki Harada[1], Ryoichi Yamaji[1]

[1]Div. Appl. Life Sci., Grad. Sch. Life Environ., Osaka Pref. Univ., Japan, [2]Grad. Sch. Agri. Sci., Kobe Univ. Japan, [3]R&D Cent., Nagaoka Co., Ltd., Japan, [4]Cent. R&D Bioresour, Osaka Pref. Univ., Japan

PC1003 Preventive effect of dietary lemon peel extract containing eriocitrin on disuse muscle atrophy

Takahito Takase[1], Naoyuki Kobayashi[1], Takashi Inoue[1], Youichi Tsuchiya[1], Rie Mukai[2]

[1]Res. and Dev. Div., Sapporo Holdings Ltd., Japan, [2]Dept . of Food Sci., Grad. Sch. of Tech., Ind. and Soc. Sci., Tokushima Univ., Japan

PC1004 The effect of wheat-derived glucosylceramide on carbohydrate and protein metabolism in muscles

Yuki Furutachi, Yutaka Miura

Dept. of Appl. Bio. Sci., Grad. Sch. of Agric., Tokyo Univ. of Agric. & Technol., Japan

PC1005 Physical characteristics of carnosine synthase gene-deficient mice -Carnosine deficiency impairs exercise performance-

Ai Egusa[1], Nobuhiro Nakao[2], Takaki Saito[1], Nobuya Yanai[3], Shigenobu Shiotani[3], Kenichiro Sato[3], Mamoru Totsuka[1], Toshihide Nishimura[4]

[1]Dept. of Food Sci. and Tec., Nippon Vet. and Life Sci. Univ., Japan, [2]Dept. of Animal Sci., Nippon Vet. and Life Sci. Univ., Japan, [3]Res. div., Tokai Bussan Co. Ltd., Japan, [4]Dept. of Nutr., Kagawa Nutr. Univ., Japan

PC1006 Estrogenic activity of 8-renylnaringenin improves skeletal muscle regeneration from disuse muscle atrophy by activating IGF-I/PI3K/Akt pathway

Rie Mukai[1], Hisao Nemoto[2], Junji Terao[3]

[1]Dept. of Food Sci., Grad. Sch. of Technol., Ind. and Social Sci., Tokushima Univ., Japan, [2]Dept. of Pharm. Chem., Inst. of Biomed. Sci., Tokushima Univ., Japan, [3]Fac. of Clin. Nutr. and Dietetics Konan Women's Univ., Japan

PC1007 Screening of compounds that suppress the transcriptional activity of FOXO1

Rintaro Matsuda, Takumi Onishi, Yuma Hirose, Yukino Hatazawa, Yasutomi Kamei

Grad. Sch. of Life and Environ. Sci., Kyoto Pref. Univ., Japan

PC1008 Gangliosides in antler prevent skeletal muscle atrophy by stimulating PI3K/Akt pathway in L6 myotubes

Jihee Yoo, Changhee Kim, Jae-Kwan Hwang

Dept. of Biotechnol., Yonsei Univ., Korea

PC1009 *Chrysanthemum morifolium* extract inhibits sarcopenia through the regulation of protein turnover and mitochondrial biogenesis

Dowan Kwon, Changhee Kim, Jae-Kwan Hwang

Dept. of Biotechnol., Yonsei Univ., Korea

PC1010 Genistein and daidzein promote PGC-1β-mediated energy expenditure gene expression in muscle cells

Shiho Nakai[1], Ran Uchitomi[1], Rintaro Matsuda[1], Takumi Onishi[1], Shinji Miura[2], Yukino Hatazawa[1], Yasutomi Kamei[1]

[1]Grad. Sch. of Life and Environ. Sci., Kyoto Pref. Univ., Japan, [2]Grad. Sch. of Nutr. and Environ. Sci., Univ. of Shizuoka, Japan

PC1011 Search for factors that define properties of fast-type myofibers in muscle satellite cells

Kaho Takigawa, Mariko Fujita, Yasutomi Kamei

Grad. Sch. of Life and Environ. Sci., Kyoto Pref. Univ., Japan

PC1012 Identification of atrophy-related FOXO1-target genes in skeletal muscle of mice

Mamoru Oyabu, Kaho Takigawa, Yasutomi Kamei

Grad. Sch. of Life and Environ. Sci., Kyoto Pref. Univ., Japan

PC1013 Analysis of metabolic changes of C2C12 myoblasts induced by the transcription factor FOXO1

Mariko Fujita, Rintaro Matsuda, Ran Uchitomi, Mamoru Oyabu, Yukino Hatazawa, Yasutomi Kamei

Grad. Sch. of Life and Environ. Sci., Kyoto Pref. Univ., Japan

PC1014 Extracellular transglutaminase 2 induces myotube hypertrophy through G protein-coupled receptor 56

Miki Yoshikawa[1], Tomoya Kitakaze[2], Naohiro Kimura[1], Yoshiyuki Ogata[1], Takahiro Ishikawa[3], Yoko Yamashita[2], Hitoshi Ashida[2], Naoki Harada[1], Ryoichi Yamaji[1]

[1]Div. Appl. Life Sci., Grad. Sch. Life Environ., Osaka Pref. Univ., Japan, [2]Dept. of Agrobiosci., Grad. Sch. of Agric. Sci., Kobe Univ., Japan, [3]Inst. Agric. Life Sci., Academic Assy., Shimane Univ., Japan

PC1015 Effects of glucosyl hesperidin intake on aerobic exercise capacity in rats

Suminori Nagayama[1], Shoichi Komine[2], Norie Arai[3], Shin Endo[3], Hajime Ohmori[2]

[1]Grad. Sch. of Comprehensive Human Sci., Univ. of Tsukuba, Japan, [2]Fac. of Health and Sport Sci., Univ. of Tsukuba, Japan, [3]R&D Div., Hayashibara Co., Ltd., Japan

PC1016 Endurance training and administration of β-hydroxy-β-methylbutyrate and black ginger prevent sarcopenia

Hajime Ohmori[1], Kai Aoki[2], Masaki Konno[2], Katsunari Honda[3], Takuya Abe[4], Takeshi Nagata[5], Masaaki Takehara[5]

[1]Fac. of Health & Sport Sci., Univ. of Tsukuba, Japan, [2]Grad. Sch. of Comprehensive Human Sci., Univ. of Tsukuba, Japan, [3]Sch. of Physical Education, Health and Sport Sci., Univ. of Tsukuba, Japan, [4]Zenyaku Hanbai Co., Ltd., Japan, [5]Zenyaku Kogyo Co., Ltd., Japan

C) Functions and Mechanisms: Exosome and microRNA

PC1101 Delphinidin suppresses muscle atrophy and upregulates miR-23a in skeletal muscle and plasma

Yuki Marugame[1], Motoki Murata[1,2], Megumi Goto[1], Yoshinori Fujimura[1], Hirofumi Tachibana[1]

[1]Div. of Appl. Biol. Chem., Grad. Sch. of Bioresour. and Bioenviron. Sci., Kyushu Univ., Japan, [2]ADRES, Ehime Univ., Japan

C) Functions and Mechanisms: Gastrointestinal Health and Diseases

PC1201 Effect of *Lactobacillus* plantarum Q180 on blood triglyceride levels and intestinal environment : a randomized, double-blind, placebo-controlled study

Ji Yeon Kim[1], Yeeun Park[1], Yeji Hyun[1], Humna Liaqat[1], Kyeong Jin Kim[1], In Suk Choi[2], Byoung-Kook Kim[2], You-Il Kim[2], Ji-Hee Kim[2], Kyungwon Shim[3]

[1]Dept. of Food Sci. and Technol., Seoul Natl. Univ. of Sci. and Technol., Korea, [2]Probiotics Res. Lab., CKDBiO Res. Inst., Korea, [3]Dept. of Family Med., Ewha Womans Univ. Mokdong Hosp., Korea

PC1202 Site-specific delivery of nucleic acid in the gastrointestinal tract via oral administration of multicompartmental capsules

Kyungjik Yang[1], Taehyung Kim[1], Jeong Un Kim[1], Il-Hwa Hong[2], Jiyong Park[1], Young Hoon Roh[1]

[1]Dept. of Biotechnol., Coll. of Life Sci. and Biotechnol., Yonsei Univ., Korea, [2]Dept. of Vet. Pathol., Coll. of Vet. Med., Gyeongsang Natl. Univ., Korea

PC1203 The effect of pectin from persimmon on small intestinal villus morphology change and nutrient absorption

Saki Gotoh[1], Kenichi Ito[2], Maki Ohno[2], Kohji Kitaguchi[1], Tomio Yabe[1,3]

[1]United Grad. Sch. of Agric. Sci., Gifu Univ., Japan, [2]Ichimaru Pharcos Co., Ltd., Japan, [3]G-CHAIN,, Japan

PC1204 An intestinal immune system-modulating activity of polysaccharide from young barley leaves and its structural characterization

Hye-Ryung Park[1], Sue Jung Lee[1], Ho-Young Park[2], Kwang-Soon Shin[1]

[1]Dept. of Food Sci. and Biotechnol., Kyonggi Univ., Korea, [2]Res. Div. of Food Functionality, KFRI, Korea

PC1205 Oral administration of rice resistant protein inhibits the expression of the regenerating islet-derived protein 3 family in mice

Ayane Mikami[1], Tasuku Ogita[2], Kanna Matsumoto[3], Takeshi Shimosato[2]

[1]Dept. of Biomed. Eng., Grad. Sch. of Med. Sci. Tec., Shinshu Univ., Japan, [2]Dept. of Biomol. Innov., Inst. for Biomed. Sci., Shinshu Univ., Japan, [3]Dept. of Agric., Shinshu Univ., Japan

PC1206 Partially hydrolyzed guar gum on fecal characteristics and gut microbiota – A randomised, double-blind, placebo-controlled, parallel-group study

Zenta Yasukawa[1,2], Ryo Inoue[3], Makoto Ozeki[1,2], Tsutomu Okubo[1,2], Tomohisa Takagi[4], Akira Honda[5], Yuji Naito[4]

[1]Nutr. Div., Taiyo Kagaku Co., Ltd., Japan, [2]Acad.-Ind. Grad. Sch., Mie Univ., Japan, [3]Lab. of Animal Sci., Dept. of Agric. and Life Sci., Kyoto Pref. Univ., Japan, [4]Mol. Gastroenterol. and Hepatol., Grad. Sch. of Med. Sci., Kyoto Pref. Univ. of Med., Japan, [5]Gastroenterol., Tokyo Med. Univ. Ibaraki Med. Cent., Japan

PC1207 Dietary fermentable fibers increase intestinal heat shock protein70 through short chain fatty acids production

Adesina Precious Adedayo[1], Takuya Suzuki[1,2]

[1]Dept. of Biofunctional Sci. and Technol., Grad. Sch. of Biosphere Sci., Hiroshima Univ., Japan, [2]Program of Food AgriLife Sci., Grad. Sch. of Integrated Sci. for Life, Hiroshima Univ., Japan

PC1208 Gut microbiota modulation by vitamin A fortification in Muslim lactating women and infants

Lukman Azis[1], Siwaporn Pinkaew[1], Santad Wichienchot[2]

[1]Dept. of Food Sci. and Nutr., Fac. of Sci. and Tech., Prince of Songkla Univ., Thailand, [2]IGS-Nutraceutical and Functional Food, Prince of Songkla Univ., Thailand

PC1209 Effect of aging with changes of chemokine production in intestines on intentinal microbiota

Ryota Igarashi[1], Shinji Fukuda[2], Hideyuki Nagafusa[3], Haruko Takeshita[4], Kazutoshi Sayama[5]

[1]Grad. Sch. of Agrc., Shizuoka Univ., Japan, [2]Inst. Adv. Biosci. Keio Univ., Japan, [3]Rese. Facility of health pro., Tokoha Univ., Japan, [4]Coll. of Edu. Academic Inst. Shizuoka Univ., Japan, [5]Coll. of Agric. Academic Inst. Shizuoka Univ., Japan

PC1210 Study on the protective effect of water extract of clam on indomethacin-induced gastric injury in rats

Yu-Jie Zhao[1], Chien-Hsing Chiang[2], Chih-Chiang Tsai[2], Yu-Kuo Chen[1,3]

[1]Dept. of Food Sci., Natl. Pingtung Univ. of Sci. and Technol., Taiwan, [2]Li Chuan Aquafarm Co. Ltd., Taiwan, [3]Natl. Pingtung Univ. of Sci. and Technol., Taiwan

PC1211 Yeast β-glucan encapsulated methotrexate for synergistically treating inflammatory bowel disease

Ying Sun, Xiaojuan Xu

Coll. of Chem. and Mol. Sci., Wuhan Univ., China

PC1212 Effects of spontaneous exercise on NASH pathology in the CDAHFD-fed mouse model

Yuya Kitada[1], Shiori Ikeda[1], Atsushi Miura[1,2], Yori Ozaki-Masuzawa[2], Takashi Hosono[1,2], Taiichiro Seki[1,2]

[1]Dept. of Appl. Life Sci., Nihon Univ. Grad. Sch. of Bioresour. Sci., Japan, [2]Dept. of Chem. and Life Sci., Coll. of Bioresour. Sci., Nihon Univ., Japan

PC1213 Intra-rectal ethanol administration for colitis predisposition in a mouse model

Fang-Yi Chu[1], Min-Chun Chang[1], David Pei-Cheng Lin[2], Han-Hsin Chang[1]

[1]Dept. of Nutr., Chung Shan Med. Univ., Taiwan, [2]Dept. of Med. Lab. and Biotechnol., Chun Shan Med. Univ., Taiwan

PC1214 High serum phospholipid dihomo-γ-linoleic acid level is associated with NAFLD in the japanese population: a cross-sectional study

Zhe Jiang[1], Takuya Hayashi[1], Kentaro Kashima[1], Kayo Kurotani[2,3], Bungo Shirouchi[1], Tetsuya Mizoue[2], Masao Sato[1]

[1]Dept. of Biosci. and Biotechnol., Grad. Sch. of Bioresour. and Bioenviron. Sci., Kyushu Univ., Japan, [2]Dept. of Epidemiol. and Prevention, Cent. for Clin. Sci., Natl. Cent. for Global Health and Med., Japan, [3]Dept. of Nutr. Epidemiol. and Shokuiku, Natl. Inst. of Health and Nutr., Natl. Inst. of Biomed. Innovation, Health and Nutr., Japan

C) Functions and Mechanisms: Metabolic Syndrome, Obesity and Diabetes

PC1301 Possible antiobesity effects of protease-A digested egg crude chalaza hydrolysates

Sheng-Yao Wang[1], Jr-Wei Chen[1,2], Yi-Ling Lin[1], Yi-Hsieng Samuel Wu[1], Yi-Chen Chen[1]

[1]Dept. of Animal Sci. and Technol., Natl. Taiwan Univ., Taiwan, [2]Poult. Ind. Sec., Dept. of Animal Ind., Council of Agric., Executive Yuan, Taiwan

PC1302 Strawberry decrease oxidative stress in high-fat diet-induced obese and diabetic mice

Manabu Wakagi, Masao Goto, Naoto Hashimoto, Hiroyuki Nakagawa, Yuko Takano-Ishikawa

Food Res. Inst., NARO, Japan

PC1303 Ameliorative effects of Alkylresorcinols for a mouse model of nonalcoholic steatohepatitis

Youhei Takagi[1], Yumika Hiraga[1], Akie Kurashina[2], Masayoshi Takayanagi[2], Shinjiro Imai[1]

[1]Sch. of Biosci. Biotech. Tokyo Univ. of Technol., Japan, [2]Nitto Fuji Flour Milling Co., Ltd., Japan

PC1304 Effect of astaxanthin on the inhibition of adipogenesis in 3T3-L1 adipocytes

Mei-Chih Tsai[1], Wei-Tang Chang[2], Chin-Lin Hsu[1]

[1]Dept. of Nutr., Chung Shan Med. Univ., Taiwan, [2]Dept. of Nutr. and Health Nutr., Chinese Culture Univ., Taiwan

PC1305 Study on the relationship between fatty acid metabolism and thermogenic function of white adipocytes

Mari Iwase[1], Soshi Tokiwa[1], Shigeto Seno[2], Takako Mukai[3], Haruya Takahashi[1], Wataru Nomura[1], Huei-Fen Jheng[1], Tatsuya Kusudo[3], Naoki Osato[2], Hideo Matsuda[2], Kazuo Inoue[1], Teruo Kawada[1,4], Tsuyoshi Goto[1,4]

[1]Div. of Food Sci. and Biotechnol, Grad. Sch. of Agric., Kyoto Univ., Japan, [2]Dept.of Bioinformatic Eng., Grad. Sch. of Information Sci. and Technol., Osaka Univ., Japan, [3]Fac. of Human Sci., Tezukayama Gakuin Univ., Japan, [4]Res. Unit for Physiol. Chem., Cent. for the Prom. of Interdisciplinary Educ. and Res., Kyoto Univ., Japan

PC1306 Effect of paternal obesity and maternal nutritional restriction during pregnancy on glucose and lipid metabolism in offspring.

Eri Nakamura, Ayaka Ishii, Ayaka Ozawa, Yukari Egashira, Shizuka Hirai

Lab. of Food Nutr., Grad. Sch. of Hort., Chiba Univ., Japan

PC1307 Calebin-A improved adipose inflammation and insulin resistance in diet-induced obesity

Ching-Shu Lai[1], Jing-Ru Lin[1], Mei-Ling Tsai[1], Min-Hsiung Pan[2], Chi-Tang Ho[3]

[1]Dept. of Sea. Sci., Nat. Kaohsiung. Univ. of Sci. and Tech., Taiwan, [2]Inst. of Food. Sci. and Tech., Nat. Taiwan Univ., Taiwan, [3]Dept. of Food. Sci., Rutgers Univ., USA

PC1308 Tetrahydrocurcumin suppression of DEHP promoted high fat diet induced nonalcoholic fatty liver disease and its molecular mechanisms of action

Yu-Chi Chu[1], Mei-Ling Tsai[1], Chi-Tang Ho[2], Ching-Shu Lai[1]

[1]Dept. of Sea. Sci., Nat. Kaohsiung. Univ. of Sci. and Tech., Taiwan, [2]Dept. of Food. Sci., Rutgers Univ., USA

PC1309 The effect of Tetrahydrocurcumin inhibits TNF-α induced insulin resistant

Yi-Zhen Tsai[1], Chi-Tang Ho[2], Min Hsiung Pan[3], Ching-Shu Lai[1]

[1]Dept. of Sea. Sci., Nat. Kaohsiung. Univ. of Sci. and Tech., Taiwan, [2]Dept. of Food. Sci., Rutgers Univ., USA, [3]Inst. of Food. Sci. and Tech., Nat. Taiwan Univ., Taiwan

PC1310 Protective effect of functional cider fermented from buni fruits *(Antidesma bunius)* against metabolic syndrome

Jennifer Lheman[1], Yanti[1,2], Bibiana Widiyati Lay[1], Raymond Rubianto Tjandrawinata[1]

[1]Master of Sci. in Biotechnol. Program, Atma Jaya Catholic Univ. of Indonesia, Indonesia, [2]Dept. of Food Technol., Atma Jaya Catholic Univ. of Indonesia, Indonesia

PC1311 Effects of hot-water extract from unripe mango fruits consumption on blood lipid levels in ApoE deficient mice

Hayato Tajiri[1], Kaede Hidaka[1], Wataru Tanaka[1], Hiroki Matsuyama[1], Yu Suzuki[2], Noriyuki Miyoshi[2], Shinji Fukii[3], Takuya Sugita[3], Kenta Hidaka[4], Yasushi Matsuura[5], Chizuko Yukizaki[5], Masanobu Sakono[1], Hiroyuki Sakakibara[1]

[1]Dept. of Agric., Univ. of Miyazaki, Japan, [2]Grad. Div. of Nutr. and Environ. Sci., Univ. of Shizuoka, Japan, [3]Agric. Administration Section, Japan, [4]Star-Fruits Co., Ltd., Japan, [5]Miyazaki Pref. Food Res. and Dev. Cent., Japan

PC1312 Studies on the body fat reducing effect of quercetin glycosides

Sumire Kishimoto, Yasujiro Morimitsu

Dept. of Food Chem., Ochanomizu Univ., Japan

PC1313 Search for vegetable-derived components that inhibit sodium/glucose cotransporter 1 (SGLT1)

Kazutaka Yoshida[1], Daito Suzuki[2], Koichi Aizawa[1], Hiroyuki Suganuma[1], Hideo Satsu[2]

[1]Nature & Wellness Res. Dept., Innovation Div., KAGOME Co., Ltd., Japan, [2]Dept. of Biotechnol., Maebashi Inst. Technol., Japan

PC1314 Analysis of Kelakai *(Stenochlaena palustris)* and the relationship of DPPH antioxidative and lipase inhibitory activity

Evelyn Antoinette Halim[1], Eisuke Kato[2], Della Rahmawati[1], Maria Gunawan Puteri[1], Yanetri Asi Nion[3]

[1]Dept. of Food Tech., Fac. of Life Sci. and Tech., Swiss German Univ., Indonesia, [2]Lab. of Food Biochem., Div. of Appl. Biosci., Grad. Sch. of Agric., Hokkaido Univ., Japan, [3]Dept. of Agronomy, Agrotech Div., Palangka Raya Univ., Indonesia

PC1315 Bisacurone derived from turmeric suppresses hepatic lipid accumulation

Hitoshi Ashida, Xiaokuo Tian, Tomoya Kitakaze, Yoko Yamashita

Dept. of Agrobiosci., Grad. Sch. of Agric. Sci., Kobe Univ., Japan

PC1316 Protective effect of *Labisia pumila* against diabetic neuropathy in an experimental rat model

Nazmun Nahar, Suhaila Mohamed

Inst. of Biosci., Univ. Putra Malaysia, Malaysia

PC1317 The effect of a diet containing fish oil during pregnancy and lactation on the insulin secretory capacity of offspring

Kota Torii, Tsuyoshi Tsuduki

Grad. Sch. of Agric., Tohoku Univ., Japan

PC1318 Effect of maternal nutritional restriction during pregnancy and pacific krill oil intake during lactation on glucose and lipid metabolism in offspring

Ayaka Ozawa[1], Eri Nakamura[1], Kanami Kawasoe[2], Ryoko Koizumi[2], Ayaka Ishii[1], Yukari Egashira[1], Shizuka Hirai[1]

[1]Lab. of Food Nutr., Grad. Sch. of Hort., Chiba Univ., Japan, [2]Lab. of Food Nutr., Fac. of Hort., Chiba Univ., Japan

PC1319 Inhibition of pancreatic lipase by a glycosylated phenolic acid from aqueous isolate of *Solanum tuberosum* L.

Katimbwa Dorsilla Anono, JinSung Ma, Dong-yup Hahn, Jinkyu Lim

Sch. of Food Sci. and Biotechnol., Coll. of Agric. Biotechnol. and Life Sci., Kyungpook Natl. Univ., Korea

PC1320 Analysis of deep sea water on lipid accumulation and inflammation in high fat diet-induced obese hamster

Min-Chun Chang[1], Shu-Ya Wu[1] Chu-Chyn Ou[1] David Pei-Cheng Lin[2], Han-Hsin Chang[1]

[1]Dept. of Nutr., Chung Shan Med. Univ., Taiwan, [2]Dept. of Med. Lab. and Biotechnol., Chung Shan Med. Univ., Taiwan

PC1321 Pyroglutamylleucine improved the increase of blood glucose levels induced by high-fat diet without improving high-fat diet-induced hepatitis

Satoshi Miyauchi, Kenji Sato

Div. of Appl. Biosci., Grad. Sch. of Agric., Kyoto Univ., Japan

PC1322 Possible lipolysis mechanisms of catechins *via* ATP consumption

Satoki Suihara, Akari Ishisaka, Akira Murakami

Dept. of Food Sci. and Nutr., Sch. of Human Sci. and Environ., Univ. of Hyogo, Japan

PC1323 Artepillin C induces thermogenesis in inguinal white adipose tissues of mice in association with a creatine metabolism-related thermogenic pathway

Sho Nishikawa[1], Takuma Hyodo[1], Hiroki Aoyama[1], Ryo Miyata[2], Shigenori Kumazawa[2], Takanori Tsuda[1]

[1]Coll. of Biosci. and Biotech., Chubu Univ., Japan, [2]Dept. of Food and Nutr. Sci., Univ. of Shizuoka, Japan

PC1324 Effect of arginyl-fructosyl-glucose (AFG) on methylglyoxal-induced insulin resistance in HepG2 cells

Tzu-Yu Wang[1], Kun-Tai Huang[1], Chi-Tang Ho[2], Hui-Yun Tsai[3], Yu-Kuo Chen[1,4]

[1]Dept. of Food Sci., Natl. Pingtung Univ. of Sci. and Technol., Taiwan, [2]Dept. of Food Sci., Rutgers Univ., USA, [3]Dept. of Nutr. and Health Sci., Fooyin Univ., Taiwan, [4]Food Biotechnol., Natl. Pingtung Univ. of Sci. and Technol., Taiwan

PC1325 Lipid-lowering effect of water fraction in ethanolic extract from gac fruit aril on diet-induced hyperlipidemia in hamsters

Ya-Ting Yang[1], Yu-Yuan Shih[1], Chi-I Chang[2], Hui-Yun Tsai[3], Yu-Kuo Chen[1,4]

[1]Dept. of Food Sci., Natl. Pingtung Univ. of Sci. and Technol., Taiwan, [2]Dept. of Biol. Sci. and Technol., Natl. Pingtung Univ. of Sci. and Technol., Taiwan, [3]Dept. of Nutr. and Health Sci., Fooyin Univ., Taiwan, [4]Food Biotechnol., Natl. Pingtung Univ. of Sci. and Technol., Taiwan

PC1326 Improvement of postprandial lipidemia by resveratrol through intestinal activation of peroxisome proliferator-activated receptor-alpha

Nobuyuki Takahashi[1], Mayu Kikuchi[1], Hiroyuki Tsuyama[1], Manae Matsuda[1], Miori Morikawa[1], Miori Tanaka[1], Hirofumi Inoue[1], Rieko Nakata[2], Hiroyasu Inoue[2], Tsuyoshi Goto[3], Teruo Kawada[3], Kaeko Murota[4], Mariko Uehara[1]

[1]Grad. Sch. of Agric., Tokyo Univ. of Agric., Japan, [2]Grad. Sch. of Agric., Nara Women's Univ., Japan, [3]Grad. Sch. of Agric., Kyoto Univ., Japan, [4]Grad. Sch. of Life and Environ. Sci., Shimane Univ., Japan

PC1327 Tomatidine reduces palmitate-induced lipid accumulation by activating AMPK *via* vitamin D receptor-mediated signaling in hepatocytes

Hikari Kusu[1], Hiroki Yoshida[1], Michiko Kudo[2], Mai Okuyama[1], Naoki Harada[1], Kentaro Tsuji-Naito[2], Mitsugu Akagawa[1]

[1]Div. of Appl. Life Sci., Grad. Sch. of Life & Environ. Sci., Osaka Pref. Univ., Japan, [2]DHC Co., Lab., Div. 2, Japan

PC1328 The effect of miso on non-alcoholic fatty liver and modulated gut microbiota in high fat diet fed rats

Yen-Chen Tung[1], Zhi-Rong Liang[1], Chi-Tang Ho[2], Kuan-Chen Cheng[1], Ting-Jang Lu[1], Min-Hsiung Pan[1]

[1]Inst. of Food Sci. and Technol., Natl. Taiwan Univ., Taiwan, [2]Dept. of Food Sci., Rutgers Univ., USA

PC1329 The regulation effects of *Ampelopsis grossedentata* derived dihydromyricetin on bile acids secretion and microbiota metabolites in metabolic syndrome

Kun Xie[1], Keyu Chen[1], Xi He[3], Kozue Sakao[1,2], De-Xing Hou[1,2]

[1]United Grad. Sch. of Agric. Sci., Kagoshima Univ., Japan, [2]Dept. of Food Sci. & Biotech., Fac. of Agric., Kagoshima Univ., Japan, [3]Coll. of Animal Sci. and Technol., Hunan Agric. Univ., China

PC1330 Effects of falcarindiol from Apiaceae vegetables on the gluconeogenesis in hepatoma cells

Jun Yoshida[1], Yui Kudo[2], Yoshiaki Ito[2], Ken-ichi Kimura[2]

[1]Dept. of Chem., Cent. Lib. Arts & Sci., Iwate Med. Univ., Japan, [2]Dept. of Biol. Chem., Fac. of Agric., Iwate Univ., Japan

PC1331 Protective effect of *Graptopetalum paraguayense* E. Walther against fructose-induced hepatic steatosis

Siou-Ru Shen, She-Ching Wu

[1]Dept. of Foodsci., Grad. Sch. of Agric. Sci., Chiayi Univ., Taiwan

PC1332 *N*-γ-(l-Glutamyl)-l-selenomethionine decreases fat storage regulated by FAT-6, FAT-7, and TRXR-1 in *C. elegans*

Chun-Han Chang[1], Harrison Xian-Qi Liao[1], Fu-Lan Hsu[2], Chi-Tang Ho[3], Vivian Hsiu-Chuan Liao[1]

[1]Dept. of Bioenviron. Sys. Eng., Natl. Taiwan Univ., Taiwan, [2]Forest Chem. Div., Taiwan Forest. Res. Inst., Taiwan, [3]Dep. of Food Sci., Rutgers, the State Univ. of New Jersey, USA

PC1333 Salmon cartilage proteoglycan improves cholesterol levels associated with postmenopausal syndrome in ovariectomized rats

Hiroyuki Nozaka[1], Erika Ozaki[1], Toshiya Nakamura[1], Ikuko Kakizaki[1], Yoji Kato[1], Masashi Goto[2], Yutaka Suekawa[2], Kazushi Yamamoto[2]

[1]Grad. Sch. of Health Sci., Hirosaki Univ., Japan, [2]Sunstar. INC, Japan

PC1334 The effect of the functional drink containing the combined *M. alba* and *L. esculentum* on lipid profiles and consumption safety in overweight volunteers

Pavina Apiboon[1], Jintanaporn Wattanathorn[1,2], Supaporn Muchimapura[1,2], Wipawee Thukham-mee[1,2], Terdthai Tong-Un[1,2]

[1]Res. Inst. For HHP&HP, Khon Kaen Univ., Thailand, [2]Physiol. Dept, Fac. Med, Khon Kaen Univ., Thailand

PC1335 Efficacy and safety evaluation of rose hip extract: double blind, randomized placebo-controlled clinical trials

Akifumi Nagatomo, Ai Teraguchi, Takayuki Kodama, Hirosato Kawakami

Morishita Jintan Co., Ltd., Japan

PC1336 *Salacia chinensis* stem extract and its thiosugar sulfonium constituent, neokotalanol, improves HbA1c levels in *ob*/*ob* mice

Toshio Morikawa[1,2], Masakazu Kobayashi[3], Junji Akaki[1,3], Yasuyo Yamaguchi[3], Hiroo Yamasaki[3], Kiyofumi Ninomiya[1,2], Yutana Pongpiriyadacha[4], Masayuki Yoshikawa[1], Osamu Muraoka[1,2]

[1]Pharm. Res. Technol. Inst., Kindai Univ., Japan, [2]Antiaging Cent., Kindai Univ., Japan, [3]Central R & D Lab., Kobayashi Pharmaceutical Co., Ltd., Japan, [4]Fac. of Sci. and Technol., Rajamangala Univ. of Technol. Srivijaya, Thailand

PC1337 The new combination of probiotics improves body weight regulation in obesity

Shih-Chien Huang[1], Yen-Ping Lei[2], Pei-Wen Hsiao[1], Ching-Pin Lin[3,4]

[1]Dept. of Nutr., Chung Shan Med. Univ., Taiwan, [2]Dept. of Nursing, Natl. Yang-Ming Univ., Taiwan, [3]Dept. of Pharm., Sch. of Med., Chung Shan Med. Univ., Taiwan, [4]Dept. of Internal Med. and Div. Gastroenterol., Chung Shan Med. Univ. Hosp., Taiwan

PC1338 Effects of sweet solution free-intake on blood glucose level and insulin concentration of mice

Sachiko Sato, Yukiko Kondo, Eiichi Taira

Dept. of Pharm., Iwate Med. Univ., Japan

C) Functions and Mechanisms: Molecular Targets of Food Factors

PC1401 Up-regulation of senescence marker protein 30 by epigallocatechin gallate attenuates t-BHP-induced oxidative stress

Kohta Arakawa, Hirofumi Inoue, Miori Tanaka, Nobuyuki Takahashi, Mariko Uehara

Dept. of Nutr. Sci. and Food Safety, Grad. Sch. of Agric., Tokyo Univ. of Agric., Japan

PC1402 Identification of the molecules involved in the anti-melanoma effect of Delphinidin

Motoki Murata[1,2], Yuka Sato[2], Yuki Marugame[2], Hirofumi Tachibana[2]

[1]ADRES, Ehime Univ., Japan, [2]Div. of Appl. Biol. Chem., Grad. Sch. of Bioresour. and Bioenviron. Sci., Kyushu Univ., Japan

PC1403 Fisetin, but not robinetin, promotes glucose uptake in skeletal muscle: Involvement of pyruvate kinase PKM and ATP-dependent RNA helicase DDX1

Hitoshi Ashida, Megumi Aya, Yoko Yamashita

Dept. of Agrobiosci., Grad. Sch. of Agric. Sci., Kobe Univ., Japan

PC1404 Identification of two G protein-coupled receptors as targets of curcumin

Yumi Arahori[1], Mai Okuyama[1], Naoki Harada[1], Yoshiaki Teraoka[1], Hiroko Horiuchi[1], Norio Yamamoto[2], Naoki Goshima[3,4], Takashi Inui[1], Hiroshi Inui[5], Ryoichi Yamaji[1]

[1]Div. Appl. Life Sci., Grad. Sch. Life Environ. Sci., Osaka Pref. Univ., Japan, [2]House Wellness Foods Co., Japan, [3]Mol. Prof. Res. Cent. Drug Discov., Natl. Inst. Adv. Ind. Sci. Technol., Japan, [4]Dept. Hum. Sci., Musashino Univ., Japan, [5]Dept. Nutr., Coll. Health Hum. Sci., Osaka Pref. Univ., Japan

PC1405 Effect of pinocembrin on human umbilical vein endothelial cell apoptosis

Ji-Hye Kim[1,2], Mok-Ryeon Ahn[1,2]

[1]Dept. of Food Sci. Nutr., Dong-A Univ., Korea, [2]Cent. for Sliver-Targeted Biomaterial, BB21 Plus Program, Grad. Sch., Dong-A Univ., Korea

PC1406 Citrus peel polymethoxyflavones, sudachitin and nobiletin, induce distinct cellular responses in human keratinocyte HaCaT cells via the MAPK pathways

Shogo Abe[1], Saki Hirose[1], Mami Nishitani[1], Akihiko Tsuji[1,2], Keizo Yuasa[1,2]

[1]Dept. of Biol. Sci. & Tech., Tokushima Univ. Grad. Sch., Japan, [2]Dept. of Biosci & Bioind., Tokushima Univ. Grad. Sch., Japan

PC1407 Wasabi 6-methylthiohexyl isothiocyanate enhances Sirtuin 1 expression by modulating AMPKα and Nrf2 pathways

Xu-Chi Pan[1], Keyu Chen[2], Kun Xie[2], Kozue Sakao[1,2], De-Xing Hou[1,2]

[1]Grad. Sch. of Agric., Kagoshima Univ., Japan, [2]United Grad. Sch. of Agric. Sci., Kagoshima Univ., Japan

PC1408 Procyanidin C1 elicits melanoma cell growth inhibition by activating the protein phosphatase 2A pathway through 67-kDa laminin receptor signaling

Jaehoon Bae, Motofumi Kumazoe, Yoshinori Fujimura, Hirofumi Tachibana

Div. of Appl. Biol. Chem., Dept. of Biosci. and Biotechnol., Fac. of Agric., Kyushu Univ., Japan

PC1409 Genistein increases NAD biosynthesis through the induction of NAMPT expression in adipocytes

Takakazu Mitani[1], Shun Watanabe[1], Shigeru Katayama[2], Soichiro Nakamura[1]

[1]Dept. of Biosci. and Biotech., Grad. Sch. of Agric., Shinshu Univ., Japan, [2]Interdisciplinary cluster for cutting edge Res., IBS, Shinshu Univ., Japan

PC1410 RNA-Seq identifies novel mechanistic targets of withaferin A in prostate cancer cells

Eun-Ryeong Hahm, Su-Hyeong Kim, Krishna B. Singh, Shivendra V. Singh

Dept. of Pharm. & Chem. Biol., Univ. of Pittsburgh Sch. of Med., USA

PC1411 Cyanidin-3-glucoside attenuates 4-hydroxynonenal-and visible light-induced retinal damage *in vitro* and *in vivo*

Yong Wang, Hui Sun, Wentao Qi

Academy of Natl. Food and Strategic Reserves Administration, China

C) Functions and Mechanisms: Nutritional Regulation of Epigenetics

PC1501 Beta-carotene exerts anti-colon cancer stem cells effects by regulating DNA methylation and histone modification

Daeun Kim, Yerin Kim, Yuri Kim

Dept. of Nutr. Sci. and Food Management, Ewha Womans Univ., Korea

PC1502 Maternal dietary inulin after pregnancy affected the development of T1D in the offspring

Yukiko Kagohashi[1], Reiko Ikeda[2]

[1]Dept. of Health and Disease, The Univ. of Shimane, Japan, [2]Fac. of Med. Shimane Univ., Japan

PC1503 Two days of prenatal methionine deficiency during the development of endocrine precursor cells impairs later-life glucose tolerance in mice

Huijuan Jia[1], Nobuaki Shiraki[2], Shoen Kume[2], Hisanori Kato[1]

[1]Grad. Sch. of Agric. and Life Sci., Univ. of Tokyo, Japan, [2]Sch. of Life Sci. and Technol., Tokyo Inst. of Technol., Japan

C) Functions and Mechanisms: Protein Modification by Food Factors

PC1601 Pyridoxamine inhibits lipofuscin formation and exerts cytoprotective action against retinal-exposed retinal pigment epithelial cells

Chika Yamashita[1], Ryoko Ide[1], Kenji Kai[1], Kyozo Suyama[2], Mitsugu Akagawa[1]

[1]Div. of Appl. Life Sci., Grad. Sch. of Life & Environ. Sci., Osaka Pref. Univ., Japan, [2]Grad. Sch. of Med., Tohoku Univ., Japan

PC1602 Breeding grapefruit for low cytochrome P4503A4 inhibition

Yelena Guttman[1], Iris Yedidia[2], Adi Nudel[1], Yuliya Zhmykhova[1], Nir Carmi[2], Zohar Kerem[1]

[1]Inst. of Biochem., Food Sci. and Nutr., The Robert H. Smith Fac. of Agric., Food and Environ., The Hebrew Univ. of Jerusalem, Israel, [2]Inst. of Plant Sci., Agric. Res. Organization, Volcani Cent., Israel

PC1603 Detection of new advanced glycation end product in collagen-glyceraldehyde system and in mice injected with glyceraldehyde

Agustin Martin-Morales, Kenji Sato

Div. of Appl. Biosci., Grad. Sch. of Agric., Kyoto Univ., Japan

PC1604 A new method for the purification of polyphenol-binding proteins by pull-down assay with polyvinylpolypyrrolidone

Xinwei Tan[1], Kazuki Maesako[2], Mitsugu Akagawa[3], Hitoshi Ashida[4], Takeshi Ishii[1,2,5]

[1]Grad. Sch. of Food and Med. Sci., Kobe Gakuin Univ., Japan, [2]Grad. Sch. of Nutr., Kobe Gakuin Univ., Japan, [3]Div. of Appl. Life Sci., Grad. Sch. of Life & Environ. Sci., Osaka Pref. Univ., Japan, [4]Dept. of Agrobiosci., Grad. Sch. of Agric. Sci., Kobe Univ., Japan, [5]Dept. of Nutr., Kobe Gakuin Univ., Japan

C) Functions and Mechanisms: Redox Regulation

PC1701 Supplementation of Morin attenuates oxidative stress and muscle wasting in mouse C2C12 skeletal myotubes treated with dexamethasone

Anayt Ulla, Takayuki Uchida, Yukari Miki, Kosuke Sugiura, Ayako Ohno, Reiko Nakao, Takeshi Nikawa

Dept. of Nutr. Physiol., Inst. of Med. Nutr., Tokushima Univ. Grad. Sch., Japan

PC1702 Mechanisms of oxidative stress induced by vitamin B_{12} deficiency in the nematode *Caenorhabditis elegans*

Tomohiro Bito[1], Naho Okamoto[2], Yukinori Yabuta[1], Fumio Watanabe[1]

[1]Fac. of Agric., Tottori Univ., Japan, [2]The United Grad. Sch. of Agric., Tottori Univ., Japan

PC1703 Retinol as well as β-carotene can enhance glutathione level in cultured murine RAW264 macrophages independent of retinoic acid signaling pathway

Rintaro Yamanishi[1], Yuuka Mukai[2]

[1]Dept. of Food Sci. & Nutr., Sch. of Nutr. & Diet., Kanagawa Univ. of Hum. Serv., Japan, [2]Dept. of Food Hyg. & Funct., Sch. of Nutr. & Diet., Kanagawa Univ. of Hum. Serv., Japan

PC1704 Hypoglycemic effect and its possible mechanism of oral administered superoxide dismutase

Shutao Liu, Hangqi Liu, Dan Zhao, Chaoyi Pan, Xuepu Jin, Yujia Hu, Xiaolu Gao, Pingfan Rao

Inst. of Biotechnol., Fuzhou Univ., China

PC1705 Effect of *Spirulina* lipids on oxidative stress in diet-induced obese mice

Yu-Hong Yang[1], Lei Du[2], Masashi Hosokawa[3], Kazuo Miyashita[3]

[1]Coll. of Food Sci. and Eng., Qilu Univ. of Technol., China, [2]Sch. of Public Health, Shandong Univ., China, [3]Fac. of Fish. Sci., Hokkaido Univ., Japan

C) Functions and Mechanisms: Skin Health

PC1801 Intestinal absorption of ceramide prepared from soy sauce lees and its dietary effect on skin barrier function

Kazushi Ohta[1], Shinobu Hiraki[2], Masakatsu Miyanabe[2], Tatsuro Ueki[3], Yuki Manabe[1], Tatsuya Sugawara[1]

[1]Div. of Appl. Biosci., Grad. Sch. of Agric., Kyoto Univ., Japan, [2]GENUINE R&D Co., Ltd., Japan, [3]Fukuoka Soy sauce Brewing Co., Japan

PC1802 Preventive effect of macelignan on particulate matter-induced skin damage by inhibiting aryl hydrocarbon receptor signaling

Jihye Park, Haneul Kang, Jae-Kwan Hwang

Dept. of Biotechnol., Yonsei Univ., Korea

PC1803 Squalene oxidation and its effect on human keratinocyte cell line HaCaT

Saoussane Khalifa, Naoki Shimizu, Junya Ito, Takahiro Eitsuka, Kiyotaka Nakagawa

Dept. of Biosci. Biotech. for Futr. Bioind., Grad. Sch. of Agric. Sci., Tohoku Univ., Japan

PC1804 Dietary ceramide 2-aminoethylphosphonate, a marine sphingolipid, is intestinally absorbed and improves dry skin in hairless mice

Nami Tomonaga[1], Yuki Manabe[1], Kazuhiko Aida[2], Tatsuya Sugawara[1]

[1]Div. of Appl. Biosci., Grad. Sch. of Agric., Kyoto Univ., Japan, [2]Innovation Cent., Nippon Flour Mills Co., Ltd., Japan

PC1805 Intake of collagen peptide improves facial skin properties –Randomized placebo-controlled double-blind trial–

Kumiko Kuwaba[1], Yoh-ichi Koyama[1,3], Yukihiro Tsukada[2], Masashi Kusubata[1], Kazunori Mizuno[1]

[1]Res. Inst. of Biomatrix, Nippi Inc., Japan, [2]Gelatin Div., Nippi Inc., Japan, [3]Inst. for Animal Reproduction, Japan

PC1806 Effects of enzymatically synthesized glycogen on PM2.5-induced inflammation in NHEK cells

Tomoya Kitakaze[1], Takashi Furuyashiki[2], Hitoshi Ashida[1]

[1]Dept. of Agrobiosci., Grad. Sch. of Agric. Sci., Kobe Univ., Japan, [2]Ezaki Glico Co., Ltd., Japan

PC1807 Effect of Chimpi extract on aquaporin in the skin

Nobutomo Ikarashi[1], Chenchen Pei[1], Miho Kaneko[1], Ai Kawasaki[1], Riho Tanaka[1], Naoya Takayama[1], Daigo Wakana[2], Tomoo Hosoe[2], Risako Kon[1], Hiroyasu Sakai[1], Junzo Kamei[1]

[1]Dept. of Biomol. Pharm., Hoshi Univ., Japan, [2]Lab. of Bioregulatory Sci., Hoshi Univ., Japan

PC1808 The p75NTR-positive fibroblasts from mouse skin respond to Pro-Hyp, collagen-derived peptide

Tomoko Asai[1], Kazunobu Yoshikawa[2], Kazuhiro Sawada[2], Xin Wei[2], Kenji Sato[2]

[1]Dept. of Food Sci. and Nutr., Fac. of Human Life and Environ. Sci., Nara Women's Univ., Japan, [2]Div. of Appl. Biosci., Grad. Sch. of Agric., Kyoto Univ., Japan

PC1809 Long-term intake of kale cultivar with high content of glucoraphanin prevents skin aging via activating Nrf2 and TβRII/Smad pathway in SAMP1 mice

Saki Ichikawa[1], Yuki Uchibori[1], Supattra Chawalitpong[1], Patipark Kueanjinda[2], Takakazu Mitani[1], Soichiro Nakamura[1], Shigeru Katayama[1,2]

[1]Dept. of Agric., Grad. Sch. of Sci. Tech., Shinshu Univ., Japan, [2]Div. of Biomol. Innov., Biomed. Inst., Shinshu Univ., Japan

C) Functions and Mechanisms: Others

PC1901 Inhibition of AGEs formation by Lotus Seedpod Oligomeric Procyanidins through RAGE-MAPK signaling and NF-κB activation in high-fat-diet rats

Qian Wu

Sch. of Food and Biol. Eng., Hubei Univ. of Technol., China

PC1902 Aged garlic extract induces aldehyde dehydrogenase via Nrf2/ARE pathway

Masako Inoue, Sihao Yuan, Tomoya Kitakaze, Hitoshi Ashida

Dept. of Agrobiosci., Grad. Sch. of Agric. Sci., Kobe Univ., Japan

PC1903 Clinical evaluation of the beneficial effects of broccoli sprout extracts on sleep quality in healthy volunteers

Masahiro Kikuchi[1,2], Yudai Aoki[3], Noriaki Kishimoto[2,4], Nana Urata[4,5], Shinji Takashimizu[4,5], Kazutaka Yoshida[3], Koichi Aizawa[3], Hiroyuki Suganuma[3], Yasuhiro Nishizaki[2,4]

[1]Dept. of Gastroenterol., Natl. Hosp. Organization Tokyo Med. Cent., Japan, [2]Tokai Univ. Tokyo Hosp., Japan, [3]Innovation Div., Kagome Co., Ltd., Japan, [4]Dept. of Clin. Health Sci., Sch. of Med., Tokai Univ., Japan, [5]Health Screening Cent., Tokai Univ. Hosp., Japan

PC1904 Analysis of lacrimal gland ageing in Klotho mutant mice

Ya-Jing Liu[1], Yu-Jin Tang[1], Tsung-Han Lu[1],Chia-Yun Hsu[1],Meng-Tian Hsieh[1], Han-Hsin Chang[2], David Pei-Cheng Lin[1]

[1]Dept. of Med. Lab. and Biotechnol., Chung Shan Med. Univ., Taiwan, [2]Dept. of Nutr., Chung Shan Med. Univ., Taiwan

PC1905 The inhibitory effects of quercetin on the intestinal cesium absorption in a Caco-2 cell system

Michiko T. Yasuda[1,2], Saki Kondo[1], Yuki Hayashi[1], Chika Tokuyama[2], Shinichi Ikushiro[3], Shin-Ichiro Karaki[2], Kayoko Shimoi[2]

[1]Sch. of Life studies, Sugiyama Jogakuen Univ., Japan, [2]Inst. for Environ. Sci., Univ. of Shizuoka, Japan, [3]Fac. of Eng., Toyama Pref. Univ., Japan

PC1906 Effects of broccoli sprout extract supplement on liver functions in healthy subjects

Masahiro Kikuchi[1,2], Yudai Aoki[3], Koichi Aizawa[3], Hiroyuki Suganuma[3], Yasuhiro Nishizaki[2,4]

[1]Dept. of Gastroenterol., Natl. Hosp. Organization Tokyo Med. Cent., Japan, [2]Tokai Univ. Tokyo Hosp., Japan, [3]Innovation Div., Kagome Co., Ltd., Japan, [4]Dept. of Clin. Health Sci., Sch. of Med., Tokai Univ., Japan

PC1907 Evaluation of Klotho mutant mice as a study model for age-related macular degeneration

Chia-Wen Huang[1], Yu-Jin Tang[1], Han-Hsin Chang[2], David Pei-Cheng Lin[1]

[1]Dept. of Med. Lab. and Biotechnol., Chung Shan Med. Univ., Taiwan, [2]Dept. of Nutr., Chung Shan Med. Univ., Taiwan

PC1908 Diet with an inulin prolongs the honeymoon period of NOD mice

Yukiko Kagohashi[1], Reiko Ikeda[2], Hiroki Otani[2]

[1]Dept. of Health and Disease, The Univ. of Shimane, Japan, [2]Fac. of Med., Shimane Univ., Japan

PC1910 Study of protein digestibility of commercial fish skin collagen and its antioxidative function during simulated gastro-intestinal digestion

Sunantha Ketnawa, Qin Wei, Yukiharu Ogawa

Grad. Sch. of Horti. Sci., Chiba Univ., Japan

PC1911 A randomized controlled trial of *Cordyceps cicadae* mycelium in dry eye syndrome

Bo-Yi Jhou[1], Jui-Hsia Hsu[1], Chin-Chu Chen[1,2,3,,4,5]

[1]Grape King Bio, Taiwan, [2]Dept. of Food Sci., Nutr., and Nutraceutical Biotechnology, Shih Chien Univ., Taiwan, [3]Inst. of Food Sci. and Technol., Natl. Taiwan Univ., Taiwan, [4]Dept. of Bioscience Technol., Chung Yuan Christian Univ., Taiwan, [5]Inst. of Biotechnology, Natl. Changhua Univ. of Education, Taiwan

PC1912 Isolation of colloidal particles from porcine bone soup and their protective effects on the epithelial cells of intestine (Caco-2 cell)

Huiqin Wang, Guanzhen Gao, Jianwu Zhou, Lijing Ke, Yongyang Jin, Pingfan Rao

Food Nutr. Sci. Centre, Sch. of Food Sci. and Biotechnol., Zhejiang Gongshang Univ., China

PC1913 An alcohol-derived metabolite salsolinol induces hepatic damage in male mice

Hyunjung Choi[1], Xiancai Zhong[2], Jeong-Eun Lee[1], Jae Min Lim[3], Kwang Pyo Kim[3], Young-Joon Surh[2], Hye-Kyung Na[1]

[1]Dep. of Food Sci. & Biotech., Coll. of Knowledge-Based Services Eng., Sungshin Women's Univ., Korea, [2]Tumor Microenviron. Global Core Res. Ctr., Coll. of Pharm., Seoul Natl. Univ., Korea, [3]Dep. of Appl. Chem., Coll. of Appl. Sci., Kyung Hee Univ., Korea

PC1914 An alcohol-derived metabolite salsolinol induces the Nrf2-mediated expression of heme oxygenase-1 in the SK-Hep1 liver cancer cells

Jeong-Eun Lee[1], Hong-Kyung Yang[2], Muhammad Usman Jamil[1,3], Hyunjung Choi[1], Young-Joon Surh[3], Hye-Kyung Na[1]

[1]Dep. of Food Sci. & Biotech., Coll. of Knowledge-Based Services Eng., Sungshin Women's Univ., Korea, [2]Dep. of Future Appl. Sci., Coll. of Nat. Sci., Sungshin Women's Univ., Korea, [3]Tumor Microenviron. Global Core Res. Ctr., Coll. of Pharm., Seoul Natl. Univ., Korea

D) Others: Analytical Methods and Omics Technologies

PD0101 Digestive stability of polyphenols in enzyme-modified common buckwheat sprouts extract using simultaneous analysis by HPLC

Davin Jang[1], Mi-Seon Kim[1], Chan-Su Rha[1], Jun-Gu Kwak[2], Jong Hoon Kim[3], Chang-Won Ahn[3], Nam Soo Han[2], Dae-Ok Kim[1]

[1]Dept. of Food Sci. and Biotechnol., Kyung Hee Univ., Korea, [2]BK 21 for Bio-Resour. Dev., Div. of Anim., Hortic. and Food Sci., Chungbuk Nat. Univ., Korea, [3]Res. & Dev. Cent., Nongshim Co., Ltd., Korea

PD0102 An improved internal standard mixture for comprehensive tracking of orally administered collagen hydrolysate using LC–MS

Yuki Taga[1], Yu Iwasaki[2], Yasutaka Shigemura[2], Kazunori Mizuno[1]

[1]Nippi Res. Inst. of Biomatrix, Japan, [2]Dept. of Nutr., Fac. Domest. Sci., Tokyo Kasei Univ., Japan

PD0103 Widely targeted metabolomics of curry using LC/MS/MS –How compounds change when curry is stored overnight? –

Takanari Hattori[1], Harumi Kubo[1], Yasuko Yamada[2], Mami Okamoto[1], Jun Watanabe[1]

[1]Shimadzu Co., Japan, [2]Shimadzu Techno-Research Inc., Japan

PD0104 Validation of a quantification method using gas chromatography-mass spectrometry –Intra-laboratory validation for specifications of food additive–

Atsuko Tada, Fuyuko Hioki, Noriko Furusho, Naoko Masumoto, Chie Tatebe, Hiroki Kubota, Kyoko Sato

Div. of Food Add., Natl. Inst. of Health Sci., Japan

PD0105 Rapid separation and analysis of self-assembled nanoparticles from black tea by capillary zone electrophoresis

Jianqiao Zou, Lijing Ke, Jianwu Zhou, Guanzhen Gao, Huiqin Wang, Zhaoshuo Yu, Zhangwen Peng, Sihao Luo, Pingfan Rao

SIBS-Zhejiang Gongshang Univ. Joint Cent. for Food and Nutr. Sci., Zhejiang Gongshang Univ., China

PD0106 Photodynamic therapy induces differential changes in human breast epithelial cells lipidome

Alex Inague, Ancély Ferreira dos Santos, Marcos Yukio Yoshinaga, Leticia Labriola, Sayuri Miyamoto

Dept. of Biochem., Chem. Inst., Univ. of São Paulo, Brazil

PD0107 Improved fermentation process monitoring using dual injection UHPLC system

Keiko Matsumoto, Katsuaki Koterasawa, Hidetoshi Terada, Kyoko Watanabe
Analytical & Measuring Dept., Shimadzu Co., Japan

PD0108 Determination of catechin and epicatechin in dark chocolate by synchronous front-face fluorescence spectroscopy

Jin Tan[1], Rong Li[1], Shu-Hua Tang[1], Ying Wang[1], Zi-Tao Jiang[1,2]
[1]Coll. of Biotechnol. and Food Sci., Tianjin Univ. of Comm., China, [2]Sch. of Food Eng., Tianjin Tianshi Coll., China

PD0109 Quantification of wheat proteins from curry paste by using phase transfer surfactants-aided proteomics approach

Takeshi Masuda[1,2], Ushio Takeda[3], Sumio Ohtsuki[1,2]
[1]Fac. of Life Sci., Kumamoto Univ., Japan, [2]AMED-CREST, Japan, [3]SCIEX, Japan

PD0110 Method development for the determination of 3-chloropropane-1,2-diol fatty acid esters and glycidyl fatty acid esters in edible oils

Hsin-Ya Tsai, Jhih-Ning Hsu, Nan-Wei Su
Dept. of Agric. Chem., Natl. Taiwan Univ., Taiwan

PD0112 Detection of cysteine peptides *in vitro* and *in vivo* digests of bovine lactoferrin

Koji Kanazawa[1], Akika Ejima[2], Megumi Nakamura[1], Yasushi A. Suzuki[1], Kenji Sato[2]
[1]Biochem. Lab., Saraya Co. Ltd., Japan, [2]Div. of Appl. Biosci., Grad. Sch. of Agric., Kyoto Univ., Japan

PD0113 Analytical characterization of silver nanowire-anchored biological interface for sucrose detection

Dipali Bagal-Kestwal, Been Huang Chiang
Inst. of Food Sci. and Tech., Natl. Taiwan Univ., Taiwan

PD0114 Physico-chemical characterization of super-wetted multi-layered nanocomposite matrix with entrapped phenoloxidases

Dipali Bagal-Kestwal, Been Huang Chiang
Inst. of Food Sci. and Tech., Natl. Taiwan Univ., Taiwan

D) Others: Animal Cell Technology

PD0201 Construction of *in vitro* NAFLD model system using coculture and analysis of food components to prevent NAFLD

Yuka Hazu[1], Yui Motomatsu[2], Atsuyoshi Nishina[3], Hideo Satsu[2]

[1]Dept. of Biotech., Grad. Sch. of Eng., Maebashi Inst. Technol., Japan, [2]Dept. of Biotech., Maebashi Inst. Technol., Japan, [3]Coll. of Sci. and Technol. Nihon Univ., Japan

PD0202 Development of a NFκB-responsive cell system and anti-inflammatory effect of 1-deoxynojirimycin in mulberry leaves

Hideo Satsu[1], Mizuki Honda[2], Asuka Kamei[3], Mio Aida[1]

[1]Dept. of Biotech., Maebashi Inst. Technol., Japan, [2]Dept. of Biotech., Grad. Sch. of Eng., Maebashi Inst. Technol., Japan, [3]KISTEC, Japan

PD0203 Elucidation of recognition mechanism of dorsal root ganglion for food factors

Yota Fukuda[1,2], Naomi Osakabe[2], Takahiro Adachi[1]

[1]Dept. of Immunol., Med. Res. Inst., Tokyo Med. and Dental Univ., Japan, [2]Dept. of Bio-Sci. and Eng., Shibaura Inst. of Technol., Japan

D) Others: Biomarkers

PD0301 Analysis of fecal gaseous metabolites in NASH-hepatocellular carcinoma model mice

Mai Kato[1], Tsutomu Hashidume[1], Yutaka Shoji[1], Kumiko Shoji[2], Miki Igarashi[3], Sumio Hayakawa[4], Yuko Yoshikawa[1,5], Noriyuki Miyoshi[1]

[1]Grad. Sch. of Integrated Pharm. and Nutr. Sci., Univ. of Shizuoka, Japan, [2]Kagawa Education Inst. of Nutr., Japan, [3]Tokyo Univ. of Agric. and Technol., Japan, [4]Nippon Med. Sch., Japan, [5]Nippon Vet. and Life Sci. Univ., Japan

PD0302 Plasma lipoprotein profiles and free choline levels in NASH model rats –novel minimally invasive indicators for NASH–

Koji Kuriyama[1], Junichiro Takahashi[1], Takanobu Kiuchi[1], Kazuyuki Hiwatashi[2], Akira Sasaki[2], Keishi Hata[2]

[1]Skylight Biotech. Inc., Japan, [2]Akita Res. Inst. of Food & Brewing, Japan

PD0303 Identification of new aging biomarkers correlated with telomere and inflammatory marker

Hikari Osawa, Tsuyoshi Tsuduki

Grad. Sch. of Agric., Sci., Touhoku Univ., Japan

PD0304 Either calf or mid-arm circumference could be a simple marker for screening of pre-sarcopenia in the middle-aged elderly

Po-Sheng Chang[1], Chi-Hua Yen[2,3,4], Ching-Ju Chiu[1], Yu-Yun Huang[1], Ping-Ting Lin[1]

[1]Dept. of Nutr., Chung Shan Med. Univ., Taiwan, [2]Sch. of Med., Chung Shan Med. Univ., Taiwan, [3]Dept. of Family and Community Med., Chung Shan Med. Univ. Hosp., Taiwan, [4]Cent. for Education and Res. on Geriatrics and Gerontology, Chung Shan Med. Univ., Taiwan

D) Others: Epidemiology

PD0401 Evaluation of daily consumption pattern as functional food sources for anticipating diabetes mellitus for Indonesian millennial generation

Indah Epriliati[1,2], Elisabeth Supriharyanti[3], Ceacilia E Susilawati[3]

[1]Dept. of Food Technol., Fac. of Agric. Technol., Widya Mandala Surabaya Catholic Univ., Indonesia, [2]Food and Nutr. Res. Cent., Widya Mandala Surabaya Catholic Univ., Indonesia, [3]Dept. of Management, Fac. of Business, Widya Mandala Surabaya Catholic Univ., Indonesia

PD0402 Association between coffee consumption and liver enzyme levels in the Korea Nurses' Health Study

Sihan Song[1], Yanghee Pang[2], Heeja Jung[3], Hea-Young Lee[4], Sue Kim[5], Oksoo Kim[2], Jung Eun Lee[1]

[1]Dept. of Food and Nutr., Coll. of Human Ecology, Seoul Natl. Univ., Korea, [2]Coll. of Nursing, Ewha Womans Univ., Korea, [3]Coll. of Nursing, Konyang Univ., Korea, [4]Dept. of Nursing, Doowon Tech. Univ., Korea, [5]Coll. of Nursing, Yonsei Univ., Korea

PD0403 Temporal variability of caffeine and caffeine metabolite concentrations in spot urine samples in 50 North Carolina adults over a six-week period

Michael Rybak[1], Ching-I Pao[1], Maya Sternberg[1], Patrick Simon[1], Jon Sobus[2], Marsha Morgan[2]

[1]US Cent. for Dis. Control and Prevention, USA, [2]US Environ. Protection Agency, Res. Triangle Park, USA

PD0404 Maternal nutritional status during pregnancy and nursing period – A comparison by meal skipping –

Yukiko Kagohashi[1], Yoko Nakatani[1], Reiko Nagashima[1], Aiko Katsube[2], Hiroki Otani[3]

[1]The Univ. of Shimane, Japan, [2]Shimane Pref. Cent. Hosp., Japan, [3]Fac. of Med. Shimane Univ., Japan

D) Others: Food Hygienics

PD0501 Preparation of water-soluble antibacterial silver nanoparticle for food applications

Yusuke Horiki[1], Kazumitsu Naoe[1], Jun Sawai[2], Masanao Imai[3]

[1]Dept. of Matl. Sci. & Chem. Eng., Fac. of Adv. Eng., Natl. Inst. of Technol., Nara Coll., Japan, [2]Dept. of Nutr. & Life Sci., Fac. of Appl. Biosci., Kanagawa Inst. of Technol., Japan, [3]Grad. Sch. of Bioresour. Sci., Nihon Univ., Japan

PD0502 Consecutive fried oil intake impairs tear quality and quantity and the adverse effects can be ameliorated by *Vitis sinocinerea* extracts

Chia-Yun Hsu[1], Pang-Yuang Huang[1], Tsung-Han Lu[1], Meng-Tian Hsieh[1], Ya-Jing Liu[1], Han-Hsin Chang[2], David Pei-Cheng Lin[1]

[1]Dept. of Med. Lab. and Biotechnol., Chung Shan Med. Univ., Taiwan, [2]Dept. of Nutr., Chung Shan Med. Univ., Taiwan

D) Others: Food Processing

PD0601 Synthesis of thermoresponsive gelatin-alginate hybrid capsules for food flavor encapsulation and controlled release

Kyungsene Lee, Young Min Kim, Keonwook Nam, Young Hoon Roh

Dept. of Biotechnol., Coll. of Life Sci. and Biotechnol., Yonsei Univ., Korea

PD0602 Size-controlled multi-layered DNA/PLL/HA nanoparticles for efficient intestinal absorption of functional food ingredient

Taehyung Kim, Keonwook Nam, Eunji Kwak, Young Hoon Roh

Dept. of Biotechnol., Coll. of Life Sci. and Biotechnol., Yonsei Univ., Korea

PD0603 Development of chitosan layered nanostructured lipid carrier for efficient delivery of Curcumin

Young Min Kim, Kyungjik Yang, Kyeong Soo Kim, Jiyong Park, Young Hoon Roh

Dept. of Biotechnol., Coll. of Life Sci. and Biotechnol., Yonsei Univ., Korea

PD0604 Immobilizing laccase on electrospun chitosan fiber for biosensing applications on fresh-cut vegetables and fruits

Jhao-Rong Jhuang[1], Shyi-Neng Lou[2], Shih-Bin Lin[2], Shih- Hsin Chen[2], Li-Chen Chen[2], Hui-Huang Chen[2]

[1]Micro-Tech Foods Ingredients, Inc., Taiwan, [2]Dept. of Food Sci., Coll. of Bioresour., Natl. Ilan Univ., Taiwan

PD0605 Quality and antioxidant properties of cookie prepared with apple pomace powder

Keum-Il Jang, Young-Kyoung Kim, Seung-Hyeon Cha, Ui-Hwan Jung

Dept. of Food Sci. Biotechnol., Coll. of Agric. Life Environ. Sci., Chungbuk Natl. Univ., Korea

PD0607 Penetration efficiency of red ginseng extract into egg by removal of cuticle layer on egg

Seung-Hyeon Cha, Ui-Hwan Jung, Keum-Il Jang

Dept. of Food Sci. Biotechnol ., Coll. of Agric. Life Environ. Sci., Chungbuk Natl. Univ., Korea

PD0608 Quality characteristics of soymilk prepared with hulled soybean

Ui-Hwan Jung, Jin-Sol Kim, Seung-Hyeon Cha, Keum-Il Jang

Dept. of Food Sci. Biotechnol ., Coll. of Agric. Life Environ. Sci., Chungbuk Natl. Univ., Korea

PD0609 Addition of pigeon pea for improve physicochemical properties, cooking quality and analog rice acceptability based on mocaf and seaweed

Satrijo Saloko[1], Sisca Diani Rosalina[2], Yudi Pranoto[2], Supriyadi[2], Sri Widyastuti[1], Muktasam[1], Rumiyati[2], Agung Endro Nugroho[2], Yekti Asih Purwestri[2], Janet Reid[3]

[1]Mataram Univ., Indonesia, [2]Universitas Gadjah Mada, Indonesia, [3]Massey Univ., Indonesia

PD0610 Impact of lemongrass *(Cymbopogon citratus)* extract preservation method to the alpha-glucosidase inhibitory activity and chemical contents

Maria DPT Gunawan-Puteri[1], Adrian Susanto[1], Nina Artanti[2]

[1]Dept. of Food Technol., Swiss German Univ., Indonesia, [2]Res. Cent. for Chem., Indonesian Inst. of Sci. (LIPI), Indonesia

PD0611 Producing the stabilized whole high amylose maize flour with high functionality

Hsi-Mei Lai, Chih-Hsuan Chan

Dept. of Agric. Chem., Natl. Taiwan Univ., Taiwan

PD0612 The thermo stability of caprine milk fat globule membrane proteins

Ying Ma, Lina Zhang, Xiaoming Liu, Peng Zhou

State Key Lab. of Food Sci. and Technol., Jiangnan Univ., China

PD0613 Changes in antigenicity of food allergens through heating and irradiation

Ikuko Minami[1,2], Mayuri Inoue[3], Sakura Iwashita[3], Etsuo Okuno[3], Koichiro Ohnuki[4], Kuniyoshi Shimizu[5]

[1]Fac. of Nutr., Kobe Gakuin Univ., Japan, [2]Intl. Coll. of Arts and Sciences, Fukuoka Women's Univ., Japan, [3]Fac. of Food and Nutr., Kyushu Nutr. Welfare Univ., Japan, [4]Dept. of Biol. and Environ. Chem., Kindai Univ., Japan, [5]Dept. of Agro-environ. Sci., Fac. of Agric., Kyushu Univ., Japan

PD0614 Analysis in active milk serum proteins of whole milk by proteomics during milk powder processing

Yaowei Liu, Lina Zhang, Peng Zhou, Xiaoming Liu

State Key Lab. of Food Sci. and Technol., Jiangnan Univ., China

PD0615 Effects of brown rice products on glucose and lipid metabolism in MS rats fed with high-fat-sucrose diet

Xiaotong Zhai, Bin Tan, Runping Liang, Yanxiang Liu, Xiaohong Tian, Nana Wu, Liping Wang, Ming Liu

Academy of Natl. Food and Strategic Reserves Administration, China

PD0618 Effects of polyphenol preservation liquid combined with vacuum packaging on the preservation of mackerel

Yuan-de Shi, Rui Ou Yang, Zhi-hui Wang, Li-peng Li, Wen-tao Chen, Lei-wen Xiang

Fuqing Branch, Fujian Normal Univ., China

D) Others: R&D of Functional Foods and Nutraceuticals

PD0701 Effect of luteolin-rich "Kiku flower extract" on serum uric acid levels in Japanese male subjects with mild hyperuricemia

Toru Takarada, Shogo Takeda, Norihito Shimizu, Marina Hirano, Hiroshi Shimoda

Oryza Oil & Fat Chemical Co., Ltd., Japan

PD0702 Comparative analysis of rhodophyta extra and DHA algal oil formula for mitigation of dry eye symptoms induced by UVB irradiation in a mouse model

Tsung-Han Lu[1], Ying-Chih Tung[2], Chia-Yun Hsu[1], Meng-Tien, Hsieh[1], Ya-Jing Liu[1], Han Hsin-Chang[3], David Pei-Cheng Lin[1]

[1]Dept. of Med. Lab. and Biotechnol., Chung Shan Med. Univ., Taiwan, [2]Taiyen Biotech Co., Ltd., Taiwan, [3]Dept. of Nutr., Chung Shan Med. Univ., Taiwan

PD0703 Comparison of antioxidant activity and DNA protection effect of *Chrysanthemum morifolium* Ramat with different solvents extraction

Chia-Ying Wang[1], Yi-Hsuan Wu[1], Kun-Lin Li[1], Chun-Ping Lu[2], Yi-Ping Yu[1]

[1]Dept. of Nutr. and Health Sci., Chinese Culture Univ., Taiwan, [2]Dept. of Food Sci., FU JEN Catholic Univ., Taiwan

PD0704 JUNSAIKOMACHI, a dietary supplement with water shield extract and sake cake dry powder

Keishi Hata[1], Sayaka Tomatsu[1], Yui Umekawa[1], Akiko Takashima[2], Munetaka Sano[2]

[1]Akita Res. Inst. of Food & Brewing, Japan, [2]Sano Inc., Japan

PD0705 Development of anti-infective oral care supplements using crude drugs containing functional ingredients

Yuriko Hoshino[1], Enrei Taka[1,2], Munehiro Hoshino[3], Motonobu Goto[4]

[1]M &A Food Technol. and Biol. of Tech. Cent. (M. A.F. T), Japan, [2]YU-KI Co., Ltd., Japan, [3]Maruboshi vinegar Co., Ltd., Japan, [4]Dept of Materials Process Eng., Nagoya Univ., Japan

PD0706 Biological preparation of a functional extracted jujube juice containing low-calorie sugar

Yan Men, Peng Chen, Jiao Li, Jiangang Yang, Yuanxia Sun

Tianjin Inst. of Ind. Biotechnol., Chinese Academy of Sci, China

PD0707 Designs of functional peptides for oral intestinal delivery with a porous silica gel

Kento Imai[1], Mijiti Maihemuti[2], Kazunori Shimizu[1], Satoshi Nagaoka[2], Hiroyuki Honda[1,3]

[1]Dept. of Biomolecular Eng., Grad. Sch. of Eng., Nagoya Univ., Japan, [2]Dept. of Appl. Life Sci., Fac. of Appl. Biol. Sci., Gifu Univ., Japan, [3]Innovative Res. Cent. for Preventive Med. Eng., Nagoya Univ., Japan

PD0708 Evaluation of functional and sensory properties of Indonesian fermented rice bran

Ardiansyah[1], Wahyudi David[1], Annisa Oktriani[1], Dody Dwi Handoko[2], Slamet Budijanto[3], Hitoshi Shirakawa[4]

[1]Dept. of Food Tech. Univ., Bakrie, Indonesia, [2]Indonesian Agency for Agric. Res., and Dev., Ministry Agric., Indonesia, [3]Fac. of Agric. Eng. and Tech., Bogor Agric. Univ., Indonesia, [4]Lab. of Nutr. Grad. Sch. of Agric. Sci., Tohoku Univ., Japan

PD0709 Studies on nutritional and antioxidative properties of raw and instant blue rices

Puspita Sari[1], Nita Kuswardhani[1], Maryanto[1], Dewi Astuti[1], Shafira[1], Tomoyuki Yoshino[2]

[1]Dept. of Agric. Product Technol., Fac. of Agric. Technol., Univ. of Jember, Indonesia, [2]Dept. of Life Sci., Fac. of Life and Environ. Sci., Pref. Univ. of Hiroshima, Japan

PD0710 Acylation of anthocyanins isolated from berries and the lipophilic properties and antioxidant capacities of the corresponding derivatives

Jie Zheng, Shiyi Ou

Dept. of Food Sci. and Eng., Jinan Univ., China

PD0711 Attenuation of meniscal/ligamentous injury induced osteoarthritis progression in obese rats by shiikuwasha extract

Zwe-Ling Kong, Yu-Wen Yen, Ying-Jiun Lai

Dept. of Food Sci., Natl. Taiwan Ocean Univ., Taiwan

PD0712 Caffeine-induced acute P1 purinergic receptor activation in lacrimal glands leads to upregulation of tear secretion in a mouse model

Meng-Tien Hsieh[1], Yu-Wen Kao[1], Tsung-Han Lu[1], Chia-Yun Hsu[1], Ya-Jing Liu[1],Han-Hsin Chang[2], David Pei-Cheng Lin[1]

[1]Dept. of Med. Lab. and Biotechnol., Chung Shan Med. Univ., Taiwan, [2]Dept. of Nutr., Chung Shan Med. Univ., Taiwan

PD0713 The effect of fermented wheat germ extract improves cancer-related fatigue receiving chemotherapy

Ming-Yi Liu[1], Shu-Hui Hu[2,3], Su-Fen Liu[4], Sue-Joan Chang[5]

[1]Dept. of Long-Term Care, Wu-Feng Univ., Taiwan, [2]Dept. of Med. Lab. Sci. and Biotechnol., Kaohsiung Med. Univ., Taiwan, [3]Dept. of Med. Res., Kaohsiung Med. Univ., Hosp., Taiwan, [4]Dept. of Nutr., Sin-Lau Hosp., Taiwan, [5]Dept. of Life Sci., Natl. Cheng Kung Univ., Taiwan

PD0714 Effects of plum concentrate on blood glucose and antioxidative activity in type 2 diabetes mice

Yun-Shan Li[1], Kazuaki Kawai[1], Hiroshi Kasai[1,2], Yuya Kawasaki[1], Yuko Ootsuyama[1]

[1]Dept. Environ. Oncol., Univ. Occup. Environ. Health, Japan, [2]OHG Inst., Japan

PD0715 Stability of microencapsulated *Spirulina platensis* treated with basil leaf and different ratio of coating material against heating during storage

Tri Winarni Agustini, Ulfah Amalia, Retno Ayu Kurniasih

Fac. of Fish. and Marine Sci., Diponegoro Univ., Indonesia

PD0716 Development of dietary supplement pudding from egg white for elderly

Preeya Dat-arun, Vatcharee Seechamnanturakit

IGS-NFF, Prince of Songkla Univ., Thailand

PD0717 Patent active water protects endothelial EA. hy 926 cells from particulate matter 2.5 μm (PM2.5)-induced aging

Shwu-Ling Peng[1], Chia-Jui Weng[2], Shun-Fa Yang[1,3]

[1]Inst. of Med., Chung Shan Med. Univ., Taiwan., [2]Dept. of Living Services Ind., Tainan Univ. of Technol., Taiwan, [3]Dept. of Med. Res., Chung Shan Med. Univ. Hosp., Taiwan

PD0718 The challenge and opportunity of using botanical ingredients in plant-based dietary supplements and functional foods

Charles (Chun) Hu

Nutrilite Health Inst., USA

PD0719 The effect of rice protein and rice peptide on the hyaluronidase inhibitor

Hui-Ju Chen[1], Siao-Ling Fan[2], Fan-Jhen Dai[1,2], Yu-Chun Huang[2], Chin-Shuh Chen[1]

[1]Dept. of Food Sci. and Biotechnol., Natl. Chung Hsing Univ., Taiwan, [2]Healthmate Co., Ltd., Taiwan

PD0720 Search for new food functionalities of euglena-derived carotenoid and extract on high-fat diet fed-mice

Neng Tanty Sofyana[1], Matsumura Akimichi[1], Aoi Nakao[1], Ayaka Nakashima[2], Kengo Suzuki[2], Yuki Manabe[1], Tatsuya Sugawara[1]

[1]Dept. of Appl. Biosci., Grad. Sch. of Agric., Kyoto Univ., Japan, [2]euglena Co., Ltd., Japan

PD0726 The prebiotic factors of fresh and chip lesser yam (*Dioscorea esculenta*) by simulation model of human colonic microbiota in batch culture fermentation

Adrian Hilman[1], Eni Harmayani[2], Muhammad Nur Cahyanto[2], Santad Wichienchot[3]

[1]Dept. of Food Sci. and Tech., Fac. of Agric, Univ. Sumatera Utara, Indonesia, [2]Dept. of Food and Agric. Prod. Tech., Fac. of Agric. Tech., Univ. Gadjah Mada, Indonesia, [3]Interdisc. Grad. Sch. of Nutrac. and Funct. Food, Prince of Songkla Univ., Thailand

PD0729 The effect of molecular structure of starch depolymerisation products, obtained by controlled microwave heating, on their in vitro enzyme-resistance

Kamila Kapuśniak[1], Justyna Rosicka-Kaczmarek[2], Joana Lopes[3], Idalina Gonçalves[3], Manuel António Coimbra[3]

[1]Dept. of Dietetics and Food Studies, Jan Dlugosz Univ., Poland, [2]Dept. Starch Technol. and Confectionery, Lodz Univ. of Technol., Poland, [3]Dept. of Chem., Univ. of Aveiro, Portugal

D) Others: Taste and Olfaction

PD0801 Earthy off-flavor in grey mullets cultivated in Hong Kong fish ponds

Hau Yin Chung, Yan Ping Chen, Kwok Cheong Chung

Food & Nutr. Sci. Prog., Sch. of Life Sci., Chinese Univ. of Hong Kong, China

PD0802 Identification of key off-flavor compounds in thermal-treated watermelon juice by GC-MS/O, aroma recombination, and omission experiments

Xiao Yang[1,3], Ye Liu[1,3], Fan Yang[1,3], Jian Li[1,3], Huan-Lu Song[1,2,3]

[1]Beijing Eng. and Technol. Res. Cent. of Food Additives, China, [2]Beijing Advanced Innovation Cent. for Food Nutr. and Human Health, China, [3]Sch. of Food and Chem. Eng., Beijing Technol. and Business Univ., China

PD0803 Volatile flavor compounds in Chinese fried food of youtiao

Jianchun Xie[1], Wenbin Du[1], Tianze Wang[1], Jia Tan[1], Dawei Zhen[2], Mengyao Zhao[1]

[1]Beijing Advanced Innovation Cent. for Food Nutr. and Human Health, Beijing Lab. for Food Quality and Safety, Beijing Technol. and Business Univ., China, [2]Beijing Lanjingzhongyu Sci. Dev. Co., Ltd., China

D) Others: Others

PD0901 Robust and human-specific lipid profile in human hepatocytes freshly isolated from chimeric mice with humanized liver

Masakazu Kakuni[1], Masaki Takahashi[1], Akira Sasaki[2], Keishi Hata[2]

[1]PhoenixBio Co., Ltd., Japan, [2]Akita Res. Inst. of Food and Brewing., Japan

PD0902 Renal histopathology under the influence of *Klotho* gene deficiency

Yu-Shan Tseng[1], Bao-Sheng Xu[1], David Pei-Cheng Lin[2], Han-Hsin Chang[1]

[1]Dept. of Nutr., Chung Shan Med. Univ., Taiwan, [2]Dept. of Med. Lab. and Biotechnol., Chung Shan Med. Univ., Taiwan

PD0903 PXB-cells® alter lipid metabolism in response to antihyperlipidemic drugs

Masaki Takahashi[1], Masakazu Kakuni[1], Keishi Hata[2]

[1]PhoenixBio Co., Ltd, Japan, [2]Akita Res. Inst. of Food and Brewing, Japan

PD0904 Functional foods – Regulatory update for USA and Canada

Jerzy Zawistowski

Fac. of Land and Food Systems, Food, Nutr. and Health, Univ. of British Columbia, Canada

PD0905 Chitoson-based film incorporated with essential oils nanoemulsions foreseeing enhanced antimicrobal effect

Samar Elshamy[1], Isao Kobayashi[1,3], Kunihiko Uemura[1,3], Mitsutoshi Nakajima[1,2,3], Marcos A. Neves[1,2,3]

[1]Tsukuba Life Sci. Innova. Prog. (T-LSI), Tsukuba Univ., Japan, [2]Grad. Sch. of Life and Environ. Sci., Tsukuba Univ., Japan, [3]Food Res. Inst., NARO, Japan

PD0906 Analysis of immuno fecal occult blood testing positive ratios in different age groups in Taiwan

Ming Hui Chen[1,2], Bio Chia Show[1], Tsung Han Lu[3], Wen Hung Lin[1], Han Hsin Chang[3], David Pei Cheng Lin[3]

[1]Tungs' Taichung MetroHarbor Hosp., Taiwan, [2]Jenteh Junior Coll. of Med., Nursing and Management, Taiwan, [3]Chung Shan Med. Univ., Taiwan

PD0907 Application to *in vitro* by o/w emulsification of oily functional ingredient

Tomoki Kugimaru[1], De-xing Hou[1,2], Kozue Sakao[1,2]

[1]Dept. of Food Sci. and Technol., Grad. Sch. of Agric., Forest. and Fish., Kagoshima Univ., Japan, [2]Cource of Biol. Sci. and Technol., The United Grad. Sch. of Agric. Sci., Kagoshima Univ., Japan

PD0908 Hydrolase inhibitor screening to decrease drug side effects

Kaori Yasuda[1], Kazuki Watanabe[1], Shinichi Ikushiro[1], Tatsuki Fukami[2,3], Miki Nakajima[2,3], Toshiyuki Sakaki[1]

[1]Fac. of Eng., Toyama Pref. Univ., Japan, [2]Fac. of Pharm. Sci., Kanazawa Univ., Japan, [3]Nano Life Sci. Inst. Kanazawa Univ., Japan

PD0909 Development of a cell-based screening assay system for identifying modulator of cytokine function

Hirotada Kojima

Osaka City Univ, Grad. Sch. Med., Japan

December 2

Luncheon Seminar 1 12:15-13:15 Room A

Sponsored by Daicel Corporation

Dietary ceramides in skin and brain health

Chair: Yasuyuki Igarashi (Hokkaido Univ., Japan)

LS01 **Dietary ceramides in skin and brain health**
12:15 Kohei Yuyama
Fac. of Advanced Life Sci., Hokkaido Univ., Japan

Luncheon Seminar 2 12:15-13:15 Room B

Sponsored by Ezaki Glico Co., Ltd.

Lipid peroxidation

Chair: Yoshinobu Terada (Ezaki Glico. Co., Ltd., Japan)

LS02 **How do edible oils and biological lipids deteriorate? Clarification by LC-MS/**
12:15 **MS**
Kiyotaka Nakagawa
Grad. Sch. of Agric. Sci., Tohoku Univ.,, Japan

Luncheon Seminar 3 12:15-13:15 Room C

Sponsored by Fuji Oil Co., Ltd.

Investigation of a preventive method for non-alcoholic fatty liver disease by food materials

Chair: Yoshiaki Kido (Kobe Univ., Japan)

LS03 **Investigation of a preventive method for non-alcoholic fatty liver disease by**
12:15 **food materials**
Hiroshi Inoue, Hitoshi Watanabe, Yuka Inaba
Inst. for Frontier Sci. Initiative, Kanazawa Univ., Japan

Luncheon Seminar 4 12:15-13:15 Room D

Sponsored by Nitto Pharmaceutical Industries, LTD.

Novel approach to food and heath by lactic acids bacteria products exopolysaccharides

Chair: Kenji Yamamoto (Kyoto Univ./Ishikawa Pref. Univ., Japan)

LS04-1 12:15 **The evaluation of host metabolic benefits by dietary intake of exopolysaccharides derived from lactic acid bacteria**

Ikuo Kimura[1,2]

[1]Dept. of Appl. Biol. Sci, Grad. Sch. of Agri., Tokyo Univ. of Agri and Tech., Japan, [2]AMED-CREST, Japan Agency for Medical Res. and Dev., Japan

LS04-2 12:45 **Gut microbiota and environment as therapeutic targets in patients with metabolic diseases**

Junichiro Irie[1,2], Hiroshi Itoh[1,2]

[1]Div. of Endocrinol, Metab and Nephrol, Dept. of Intern Med., Keio Univ. Sch. of Med., Japan, [2]AMED-CREST, Japan Agency for Medical Res. and Dev., Japan

Luncheon Seminar 5 12:15-13:15 Room E

Sponsored by PHARMA FOODS INTERNATIONAL CO., LTD. & ja.z-tamago.Co., Ltd.

The Hidden Health-Related Jewels from Egg

Chair: Lekh R. Juneja (ROHTO Pharmaceutical Co.,Ltd., Japan)

LS05-1 12:15 **Incidence of "autism secondary to folic acid deficiency" in autism spectrum and efficacy of the dietetic therapy with "Folate-enriched Egg (F-eEgg)"**

Shizuo Oi[1,2,3], Takuichi Makino[4], Mujyo Kim[3]

[1]"Developmental Brain Out-patients Clinic", Oi Clinic, Japan, [2]Pediatric Neurosurgery, Intl. Neuroscience Inst. [INI], Germany, [3]PHARMA FOODS INTERNATIONAL CO.,LTD, Japan, [4]JA ZEN-NOH Tamago Co., Ltd, Japan

LS05-2 12:35 **Novel bioactive peptides derived from egg-yolk: Promotion of bone and cartilage growth, maintenance and regeneration**

Denise Zujur[1], Chihiro Awada[1], Utano Nakamura[1], Kiyoshi Miwa[1], Yoshiaki Kitaura[2], Hironori Hojo[2,3], Ung-il Chung[2,3], Shinsuke Ohba[4], Mujo Kim[1]

[1]Pharma Foods International Co., Ltd., Japan, [2]Dept. of Bioengineering, The Univ. of Tokyo, Japan, [3]Cent. for Disease Biol. and Integrative Med., The Univ. of Tokyo, Japan, [4]Dept. of Cell Biol., Inst. of Biomedical Sciences, Nagasaki Univ., Japan

LS05-3 **From the egg to the hair: a novel peptide derived from egg yolk that induces hair growth**
12:55
Md Saddam Hossain[1], Toshio Nakamura[1], Kyungho Park[2], Yoshikazu Uchida[1], Atsushi Yamatsu[1], Noriko Horie[1], Mujo Kim[1], Satoshi Itami[3]
[1]Pharma Foods International Co. Ltd., Japan, [2]Dept. of Food Sci. and Nutr., Hallym Univ., Gangwon-do, Korea, [3]Dept. of Regenerative Dermatology, Osaka Univ. Grad. Sch. of Med., Japan

Luncheon Seminar 6 12:15-13:15 Room F

Sponsored by Nisshin Seifun Group Inc.

Chrono-nutrition studies on sleep and metabolism

Chair: Satomi Nozaki (Nisshin Seifun Group Inc., Japan)

LS06 **Chrono-nutrition studies on sleep and metabolism**
12:15
Katsutaka Oishi[1,2,3,4]
[1]Biol. Clock Res. Gr., AIST, Japan, [2]Grad. Sch. of Frontier Sci., The Univ. of Tokyo, Japan, [3]Facul. of Sci. and Technol., Tokyo Univ. of Sci., Japan, [4]SIGMA, Univ. of Tsukuba, Japan

December 3

Luncheon Seminar 7 12:15-13:15 Room A

Sponsored by TAIYO KAGAKU CO., LTD

Intestinal studies of catechin (EGCG)

Chair: Junji Terao (Konan Women's Univ., Japan)

LS07 12:15 **Epigallocatechin-3-gallate (EGCG) attenuates non-alcoholic fatty liver disease via modulating the interaction between gut microbiota and bile acids**
Yuji Naito
Dept. of Gastroenterology and Hepatology, Kyoto Pref. Univ. of Med., Japan

Luncheon Seminar 8 12:15-13:15 Room B

Sponsored by Clinical Trial Center for Functional Foods, Chonbuk Natil. Univ. Hosp.

Clinical Trial Center for Functional Foods in Korea

Chairs: Byung-Hyun Park (Chonbuk Natl. Univ. Med. Sch., Republic of Korea)
Eun Ju Bae (Chonbuk Natl. Univ., Republic of Korea)

LS08-1 12:15 **Challenges for developing functional foods**
Eun-Kyung Choi
Clinical Trial Center for Functional Foods, Chonbuk Natl. Univ. Hosp., Korea

LS08-2 12:35 **Prevalence and associated risk factors of prediabetes in Korean population: A cross-sectional study**
Byung Hyun Park
Dept. of Biochem., Chonbuk Natl. Univ. Med. Sch., Korea

LS08-3 12:55 **The associations between liver enzymes and the risk of cardiovascular diseases in Koreans with mild dyslipidemia**
Eun Ju Bae
College of Pharmacy, Chonbuk Natl. Univ., Korea

Luncheon Seminar 9 12:15-13:15 Room C

Sponsored by Sun Chlorella Corp.

Active compounds in chrollela for human health

Chair: Tatsuya Sugawara (Kyoto Univ., Japan)

LS09 **Presence of monoamines in hot water extract of chlorella**
12:15 **-Possible bioactive compounds in chlorella**
Kenji Sato
Div. of Appl. Biosci., Grad. Sch. of Agric., Kyoto Univ., Japan

Luncheon Seminar 10 12:15-13:15 Room D

Sponsored by NUTRILITE

Plants for nutrition and wellness – Ensuring authenticity, purity, safety and efficacy

Chair: Colleen Carkeet (Amway Co., USA)

LS10-1 **Botanicals: Science behind traceability**
12:15 Amit Chandra
Chromatography, Analytical Sci. R&D, Amway Co., USA

LS10-2 **Ayurveda / Traditional medicine: Concept and health benefits based on botanicals**
12:40 Padma Venkat
Sch. of Public Health, SRM Inst. of Sci. and Technol., India

13:35 **Panel Discussion**

Luncheon Seminar 11 12:15-13:15 Room E

Sponsored by Maruha Nichiro Corporation

Overview of clinical trial system for functional foods in Hokkaido, Japan

Chair: Kazuo Miyashita (Hokkaido Univ., Japan)

LS11 **Overview of clinical trial system for functional foods in Hokkaido, Japan**
12:15 Jun Nishihira
Dept. of Med. Management Informatics, Hokkaido Information Univ., Japan

Luncheon Seminar 12 12:15-13:15 Room F

Sponsored by Agilent Technologies, Inc.

Study of metabolism for polyphenols using LC/MS/MS and metabolomics of Japanese grean tea “Kaga Boucha” using GC/MS

Chair: Hiroshi Hara (Fuji Women's Univ., Japan)

LS12 **Study of metabolism for polyphenols using LC/MS/MS and metabolomics of**
12:15 **Japanese green tea “Kaga Boucha” using GC/MS**

Seiya Tanaka[1], Takaaki Ishibashi[1], Tetsuya Sasaki[2]
[1]Agilent Technologies, Inc., Japan, [2]Industrial Res. Inst. of Ishikawa, Japan

December 4

Luncheon Seminar 13 12:15-13:15 Room A

Sponsored by SCIEX

New approaches for Functional food analysis using LC-MS/MS

Chair: Ushio Takeda (SCIEX, Japan)

LS13 New approaches for Functional food analysis using LC-MS/MS
12:15 Teruo Miyazawa
New Industry Creation Hatchery Center, Tohoku Univ., Japan

Luncheon Seminar 14 12:15-13:15 Room B

Sponsored by POLA ORBIS HOLDINGS INC.

Frontline research of diets for skincare

Chair: Mikio Kinoshita (Obihiro Univ., Japan)

LS14 Frontline research of foods for skincare –Regarding Plant-derived
12:15 **Glucosylceramides and Pterocarpus Marsupium Heartwood Extract–**
Tatsuya Sugawara[1], S. Hirakawa[2], M. Kinoshita[3]
[1]Div. of Appl. Biosci., Grad. Sch. of Agric. Kyoto Univ., Japan, [2]Mult. Intelli. Res. Cent., Pola Orbis HD Inc., Japan, [3]Dept. of Food Sci., Obihiro Univ. of Agric. and Vet. Med., Japan

Luncheon Seminar 15 12:15-13:15 Room C

Sponsored by Nippon Flour Mills Co., Ltd.

Functional Foods Components and Exercise

Chair: Shinji Okada (Univ. of Tokyo, Japan)

LS15-1 Frontiers in fality prevention in area of sport sience
12:15 Tomohiro Okura
Fac. of Health and Sport Sci., Univ. of Tsukuba, Japan

LS15-2 Maslinic acid could be effective in preventing mobility-related disability
12:55 Yuki Yamauchi
Nippon Flour Mills Co., Ltd., Japan

Luncheon Seminar 16 12:15-13:15 Room D

Sponsored by Kewpie Corporation

The healthy & nutritional properties of eggs –Promoting better & happier life–

Chair: Keiko Abe (Univ. of Tokyo., Japan)

LS16 **The healthy and nutritional properties of eggs –Promoting better & happier life–**
12:15 Masao Sato
Dept. of Biosci. and Biotechnol., Fac. of Agric, Grad. Sch., Kyushu Univ., Japan

Luncheon Seminar 17 12:15-13:15 Room E

Sponsored by MIYARISAN PHARMACEUTICAL CO., LTD.

Bug and cancer

Chair: Yuji Naito (Kyoto Pref. Univ. of Med., Japan)

LS17 **Bug and cancer**
12:15 Osamu Handa
Dept. of Gastroenterology, Kawasaki Med. Sch., Japan

Luncheon Seminar 18 12:15-13:15 Room F

Sponsored by Association for Salacia Promotion

Salacia, an ayurvedic traditional medicine, as a prominent natural resource for the functional food claiming anti-diabetes

Chair: Masayuki Yoshikawa (Professor Emeritus, Kyoto Pharmaceutical Univ., Japan)

LS18 **Salacia, an ayurvedic traditional medicine, as a prominent natural resource**
12:15 **for the functional foods claiming anti-diabetes**
Osamu Muraoka
Professor Emeritus, Kindai Univ., Japan

Author Index

L

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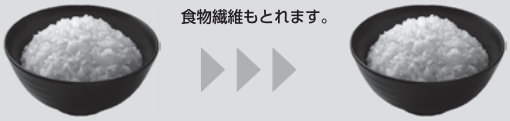

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「日本食品標準成分表 2015 年版（七訂）」水稲めし・精白米参照。

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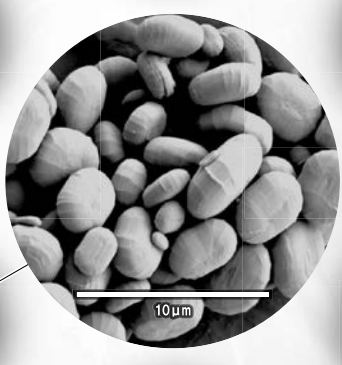

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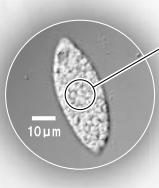

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*1: Sunstar research. Reference: "List of Approved (Authorized) Foods for Specified Health Uses", Consumer Affairs Agency, March 2016. *2: Sales performance Feb. 2009 – end of May 2018.*3: Sunstar research. Sales performance (monetary share) within foods (beverages) sold by Sunstar, calculated Jan. 2017 – end of Dec. 2017.

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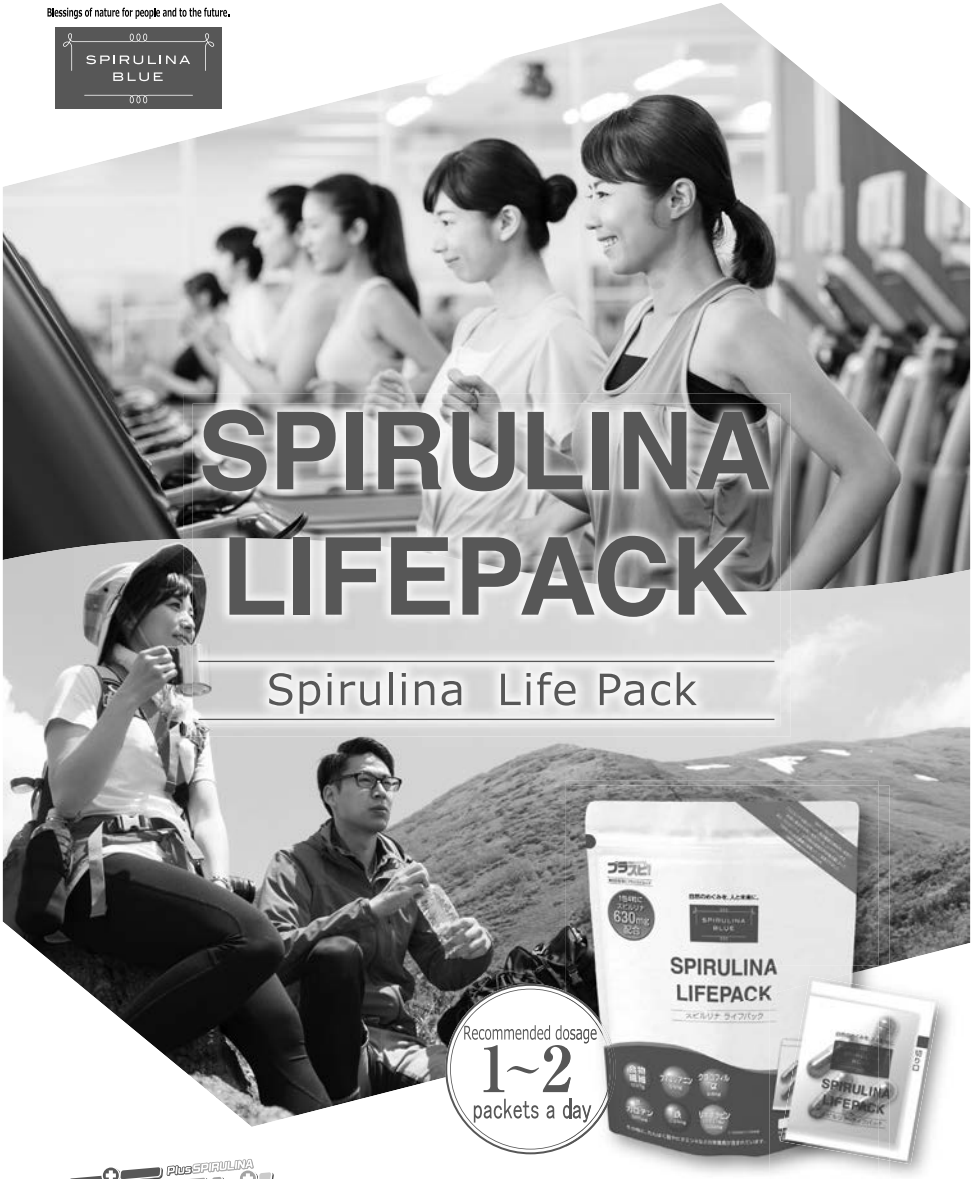
AJINOMOTO オリーブオイル マイルドタイプ

新鮮なオリーブの風味がほどよく香るオリーブオイルです。
揚げもの、炒めものをはじめ、どんなお料理にもお使いいただけます。

Joy for Life
J-オイルミルズ J-OIL MILLS https://www.j-oil.com/

Blessings of nature for people and to the future.

SPIRULINA BLUE



プラスピ! Plus SPIRULINA

Add spirulina to your everyday life.

Spirulina in capsules **Spirulina Life Pack**

Low-temperature dried spirulina in capsules easy to take.

質量分析計のグローバルリーダー

SCIEX

X500R QTOF システム：ベンチトップ型 QTOF

ユーザーの皆様の声に基づき、開発を行った
直感的なインターフェースで操作や習得が簡単なソフトウェア（SCIEX-OS）
最小サイズのフットプリントで、コンパクトなベンチトップ型

Triple Quad 5500+ システム -QTRAP® READY: SCIEX 独自技術のリニアイオントラップ採用

6 桁ものダイナミックレンジ、5msec の高速ポラリティスイッチングを実現
QTRAP 機能をアクチベートすることで、
定性能力や複雑なサンプル中の選択性が向上

詳しくはこちら ▶▶▶ **https://sciex.jp**

SCIEX 株式会社エービー・サイエックス

本社：〒140-0001 東京都品川区北品川 4-7-35 御殿山トラストタワー 21F
TEL：0120(318)551 FAX：0120(318)040
大阪：〒531-0072 大阪府大阪市北区豊崎 3-19-3 ピアスタワー 3F
www.sciex.jp Email：jp_sales@sciex.com

MKT13-801A

FUJICCO is proud of being at the forefront of Soy study from research and development to product manufacturing technology.

'Fujiflavone' is developed in the process of pursuing the characteristics of Soy and the successful extraction of isoflavones which promote bone formation.

Fujiflavone™

フジフラボン

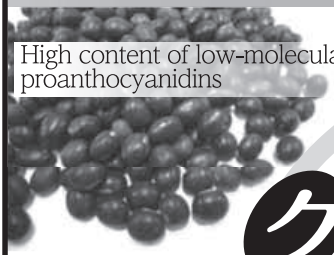
Food ingredient for 'Foods with Functional Claims'

Functional food material for contributing to beauty and health in various ways.

Applications

- Functional foods (For bone health, menopause symptoms and beauty)
- Drinks
- Weight control foods
- Confectionery
- Cosmetics

FUJICCO, the top manufacturer of soybean processed food in Japan provides isoflavone as **'Fujiflavone'**



High content of low-molecular-weight proanthocyanidins

CHRONO-CARE SP
Black Soybean Polyphenol

クロノケア® SP

Features

- High water solubility
- Top-class anti-oxidant value
- Improvement of blood flow and vascular endothelial function
- Anti-glycation effect
- Improvement of Lipid metabolism
- Beauty effect

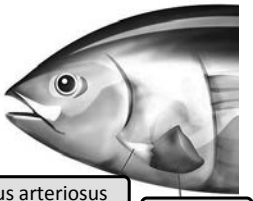
Applications

- Dietary Supplements
- Drinks
- Cosmetics

FUJICCO Co., Ltd. Medical Care Food Supply Sales Division
Health Care Food Group
6-13-4 Minatojima-Nakamachi, Chuo-Ku, Kobe 650-8558, JAPAN
Tel: +81-78-303-5925 Fax: +81-78-303-5946
URL: https://www.fujicco.co.jp E-mail: f-ffid@fujicco.co.jp Staff: Takaki and Okabe

Bonito Elastin Peptide

This product contains marine elastin peptide derived from highly flexible bulbus arteriosus.



- Elastin is the core protein , which gives elasticity to tissues, such as skin, aorta, ligaments, and lungs.

Evidence

【 **Beauty** 】Effects on skin condition and breast area
【 **Health** 】Effect on blood vessel
【**Locomotive syndrome**】Effect on knee joint pain
【**Sports**】Effect on ligament

Product specifications

Desmosine and Isodesmosine : More than 0.1%

＊ Desmosine and Isodesmosine :
The elastin-specific crosslinking amino acids

Water Chestnut Extract

- The active ingredient of this product is boiled water chestnut rind extract.
- This ingredient has a long and rich history of use in teas.

• Ingredient:water chestnut

Evidence

【**Clinical study**】Significant improvement in skin elasticity
【**Anti - glycation**】Generation suppression of AGEs
【**Blood sugar**】Control post-prandial increases in blood sugar
【**Cleavage of glycated products** 】Cleavage of carbonyl groups

Product specifications

Total polyphenol:More than 25%

Ascophyllan HS

- This product is extracted from the seaweed *Ascophyllum nodosum*.
- *Ascophyllum nodosum* has rich eating experience.

• Ingredient:*Ascophyllum nodosum*

Evidence

【**Immunostimulatory activity**】
Prevention of pneumonia, Anti-tumor activity
【**Blood sugar controlling activity**】
Intestinal GLP-1-mediated control of blood sugar levels

Product specifications

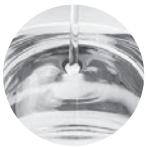
Ascophyllan amount : Not less than 20%

HAYASHIKANE SANGYO CO., LTD.
SALES DEPT. OF FUNCTIONAL FOOD DIV.
4-8.2-CHOME. YAMATO-MACHI
SHIMONOSEKI-SHI 750-8608 JAPAN
TEL：+81-83-266-1191 FAX：+81-83-266-6461
URL: http://www.hayashikane.co.jp

nippn 健康と美容をサポートする ニップンの健康素材シリーズ

機能性表示
対応素材※

アマニ油／アマニ油プレミアムリッチ



アマニを圧搾法（コールドプレス）により搾油・精製したクセのない植物油です。α-リノレン酸を60%以上含有するプレミアムリッチもご用意しています。

※弊社のアマニは、食品用に開発された「ゴールデン種」のみを使用しています。

サプリメント、スープ、パン菓子類、ドレッシングなどに。

機能性表示
対応素材※

myoceram®

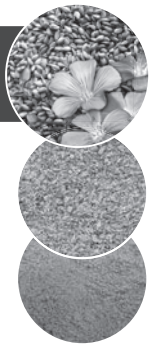
セラミド【美容素材】

米由来 RPS/RLG/RE
トウモロコシ由来 CP

米、トウモロコシを原料に抽出した素材。独自の抽出・精製方法により、色や味、匂いに影響する不純物が少なく加工適性にも優れています。

サプリメント、飲料、ゼリー、化粧品などに。

ローストアマニ 粒／粉末／粉末F



アマニをローストして香ばしく仕上げました。オメガ3脂肪酸、食物繊維、ポリフェノールの一種であるアマニリグナンを含みます。粒・粉末の他、より細かな粉末に仕上げた粉末Fもご用意しています。

パン、菓子類、シリアル、サラダ、ヨーグルト、アイスのトッピング、ふりかけなどに。
粉末Fはスムージーなどの飲料にも。

オリーブ果実マスリン酸 【関節と筋肉のサポート素材】

オリーブ果実から希少成分を抽出。主成分としてトリテルペン類であるマスリン酸を含有しています。熱への安定性に優れ、加熱調理をする食品にもご利用可能です。

サプリメント、グミ、飴、ゼリー、プロテインなどに。

アマニリグナン

アマニに含まれるポリフェノール成分。水溶性のため飲料にも使えます。

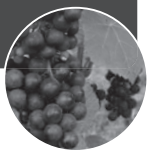
サプリメント、飲料、ゼリーなどに。

小麦ふすま

国産小麦ふすまのみを原料に、特殊加熱加工し、従来品より食べやすくしました。食物繊維が豊富な素材です。

パン、菓子、麺類などに。

パミスエキス 【口腔ケア素材】



赤ワイン製造時に発生する搾り粕（パミス）より抽出。主成分としてオレアノール酸を含有しています。

グミ、ガム、タブレット形状の口中清涼剤などに。

小麦若葉 【オーガニック素材】

有機栽培した若葉を新鮮な状態のまま、まるごと乾燥粉砕しました。有機JAS取得。えぐみ苦味のないナチュラルなおいしさです。

青汁、スムージー、パン、菓子、麺類、和菓子などに。

※アマニ油、セラミドについては 機能性表示 に関するご相談もお受け致します。

日本製粉株式会社 ヘルスケア事業部 https://www.nippn.co.jp TEL.03-3511-5357 FAX.03-3237-3541
NIPPON FLOUR MILLS CO.,LTD. Health care Business Division http://www.e-nippn.com/index.php
TEL : (+81) 3 3511 5357 ／ FAX : (+81) 3 3237 3541

Natural Human type Ceramide
天然ヒト型セラミド

Very Long Chain Phytoceramide

History

It has been over 100 years since the renown skin-brightening ingredient, kojic acid was discovered from koji mold, *Aspergillus oryzae*, the naturally occurring culture that has been used for centuries in Japan to make soy sauce, sake and miso.

We are proud to announce the discovery of our revolutionary ceramides from Koji. The world's first Natural human-type ceramide created through the traditional Japanese soy sauce fermentation process is safe, effective and stable.

What are Ceramides?

Ceramides are biogenic components found in the skins outer layer. Its function is to protect against moisture loss to keep skin both youthful and supple.

The loss of ceramides causes aging skin permeable to moisture, leaving skin dry

Process

Our scientist has developed a unique process to extract Natural human-type ceramide from the byproduct of the centuries-old soy sauce making process.

Soy Sauce Cake

Extract

High Purity
Ceramide Powder

6 Key Characteristics

Increase skin's water-retention capacity

Barrier repair and cell regulation

Protect skin and prevent moisture loss

Improve skin texture

Renew, rebuild and restore aging skin

Reduce roughness and dryness

Food Ingredients:

Natural phytoceramide
Phytosphingosine binding ceramide, human-type with intestinal absorbability

Natural sphingomyelin
Water dispersible

Natural polyphenolipid (oil-soluble polyphenol)
Long chain alkyl derivatives of caffeic acid such as palmitoyl caffeate

Natural black sesame polyphenol
Phenolic polymer extracted from organic black sesame seed coat

Contact information TEL. 03-6809-3650 FAX. 03-6809-3653

Genuine R&D Co,.Ltd. 株式会社ジェヌインR&D

Tokyo offece //

Rohto Tokyo Building 5F,1-7-5 Shiba Minato-ku,Tokyo 105-0014

E-mail : info2@genuinerd.co.jp **https://genuinerd.com**

Genuine R & D

NISSHIN
oillio
"The Natural Power of Plants"

MCT CHARGE!!

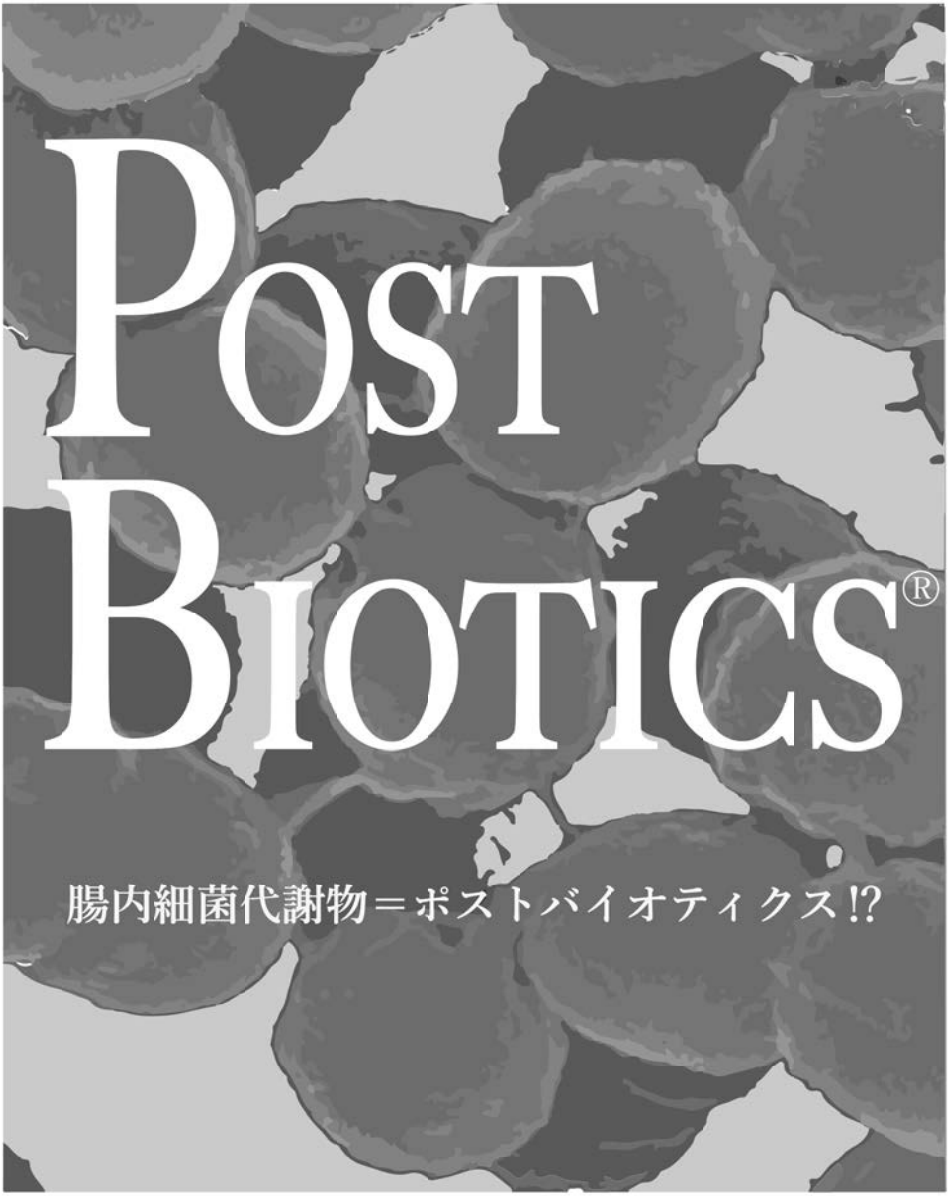
Move and burn your body fat

Pursue your ideal physical condition

MCT
中鎖脂肪酸

Nisshin OilliO's MCT

The Nisshin OilliO Group, Ltd. www.nisshin-oillio.com



NITTO PHARMACEUTICAL INDUSTRIES,LTD.

NOSTER®

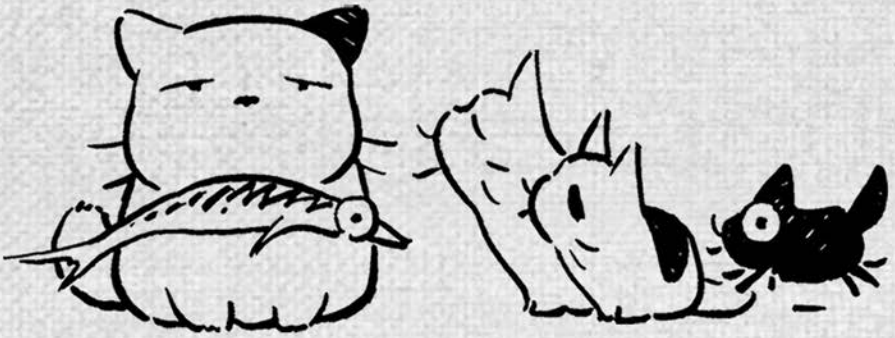
Connecting life & gut microbiome.

健康と信頼をお届けする

日清製粉グループ

おなか
すいたね。

日清製粉グループ オリジナルキャラクター
”コニャラ“と”子コニャラ“



日清製粉グループ

https://www.nisshin.com/


True to nature, the flavor of
KAGOME
KAGOME
野菜生活100
アップルサラダ
1食分の野菜
たっぷりビタミンC
20種の野菜と6種の果実
野菜汁60%＋果汁40%＝100%
KAGOME
濃厚
野菜不足に!飲むサラダ
野菜
これ一本
30品目の野菜 350g分
野菜由来の食物繊維&リコピン
野菜汁100%
KAGOME
あまいトマト
リコピンたっぷり
完熟トマト6個分使用
濃厚なあまさ
糖度10
砂糖・食塩無添加
トマト100%
KAGOME
野菜生活100
オリジナル
1食分の野菜
たっぷりビタミンC
ビタミンA
20種の野菜と3種の果実
野菜汁60%＋果汁40%＝100%
KAGOME
野菜生活100
マンゴーサラダ
1食分の野菜
1日分のビタミンC
19種の野菜と9種の果実
野菜汁60%＋果汁40%＝100%
KAGOME
野菜生活100
ベリーサラダ
1食分の野菜
ビタミンA
ポリフェノール
20種の野菜と6種の果実
野菜汁60%＋果汁40%＝100%

ファイトケミカルスをリードして85年

ニュートリライトはビタミンおよび栄養補給食品における

売上高世界No.1ブランド*

ニュートリライト®の
詳細はコチラ

NUTRILITE™

＊ ユーロモニターインターナショナルにより実施された世界のビタミンおよび栄養補助食品のグローバルブランドに関する調査より（総小売額、2018年）　※原料植物のイメージです。植物によって最適な部位を使用しています。

Science. Art. Love.

POLA

POLA White shot
INNER LOCK TABLET IXS

Formulated to promote crystal clear transparent skin from within.

Simply you. Simply beautiful.

ORBIS

ORBIS DEFENCERA

The first food* for skincare that is permitted to display its function in Japan.

*As a product for sale

The product contains glucosylceramide derived from rice germs to retain moisture in the skin. This product is ideal for people with dry skin.Healthy balanced diet consists of main dish, main vegetable dish, and a side vegetable dish.

POLA ORBIS HOLDINGS

Sensitize the world to beauty.

POLA ORBIS HOLDINGS INC. c/o POLA CHEMICAL INDUSTRIES, INC. POLA R & M
560 Kashio-cho, Totsuka-ku, Yokohama-shi, Kanagawa 244-0812 JAPAN +81-45-826-7131

Looking toward 2030

Becoming an advanced daily healthcare company

We will realize "healthy minds bodies for all," through the "ReDesign" of the everyday rituals to become more natural, easy and enjoyable.
To this end, we will create "customer exprerience-based value" in the areas of health, comfort and cleanlinesee.

life. love.
LION

ReDesign
Health Comfort Cleanliness

LION's Functional health food with health claim

Lactoferrin health food market
No.1 in sales for 10 consecutive years※1
Survey by Yano Research Institute

2,000,000
Lactoferrin Series Cumulative experience exceeded 2.0 million※2
Survey by LION

※1 : Health foods (for supplement-shaped products) domestic market containing lactoferrin as the main component, 2008-2017 manufacturer shipment value base series products total value, Survey by Yano Research Institute, Inc. As of June 2019. ※2 : Survey by LION. As of August 2019

If you are interested, please come to the *LION* booth.

Cluster Dextrin™

New Energy Source for Athletes

HBCD

Highly Branched Cyclic Dextrin

Glico Nutrition Co., Ltd.

GLOBAL SALES GROUP, SALES DIVISION

4-6-5, Utajima, Nishiyodogawa-ku, Osaka, 555-8502, Japan
FAX: +81-6-6477-8673

E-MAIL: g-ingredients@glico.com
http://www.glico.com/nutrition/en/

For Promotion of Health

湧永製薬が創製した
ニューキノロン系抗菌剤
「Delafloxacin」

湧永製薬 広島工場

HLAタイピング試薬

創業以来、天然素材に着目し数々の製品を生み出して参りました。特にニンニクを長期間熟成することによって得られた熟成ニンニク抽出液は、その有用性・安全性が高いことが示されており、人々の健康増進に寄与しています。当社は国内のみならず、アメリカ、ドイツ、イタリア、イスラエル、オーストラリア等の大学・研究機関との共同研究を行い、多数の論文・学会発表を行ってきております。さらに当社はニンニク研究のほか、創薬研究や試薬診断薬の開発も進めています。

「第6回 国際ニンニクシンポジウム」が日本 (広島) で開催され、ニンニク及び熟成ニンニク抽出液の動脈硬化・高血圧や歯周病などへのリスク軽減効果について数々の発表及び活発な議論がなされました。

＜主な発表内容＞
・生物・薬理活性物質の探索分離と機能解明　・循環器基礎臨床研究　・炎症免疫調節
・脳神経機能　・口腔疾患　・代謝

本シンポジウムのプロシーディングスがExperimental and Therapeutic Medicineにまもなく掲載予定です。

当 社 の 論 文 ・ 特 許 紹 介

ニンニクの基礎・臨床研究　論文・学会発表総数　640件以上

- Suzuki J et al. Anti-inflammatory action of cysteine derivative S-1-propenylcysteine by inducing MyD88 degradation. Sci Rep. 8(1):14148, 2018.
- Morihara N et al. Aged garlic extract suppresses inflammation in apolipoprotein E-knockout mice. Mol Nutr Food Res. 61(10), 2017.
- Nakamoto M et al. Isolation and identification of three g-glutamyl tripeptides and their putative production mechanism in aged garlic extract. J Agric Food Chem. 66(11):2891-2899, 2018.

試薬診断薬の開発　論文・学会発表総数　180件以上

- Nakamura T et al. Detection of Intragraft Anti-Blood Group A and B Antibodies Following Renal Transplantation. Transplant Proc. 51(5):1371-1377, 2019.

創薬研究　論文・学会発表及び特許総数　600件以上

- Kinoshita T et al. NOVEL PYRIDONE CARBOXYLIC ACID DERIVATIVE OR SALT THEREOF, WO2017217441
- Yamaguchi T et al. NOVEL PYRIDONE CARBOXYLIC ACID DERIVATIVE OR SALT THEREOF, WO2018174266

論文一覧：http://www.wakunaga.co.jp/paper/

Wakunaga Pharmaceutical
湧永製薬株式会社

EMIQ®

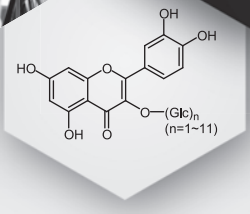
Quercetin glycoside

-Enzymatically modified isoquercitrin-

Our original ingredient, EMIQ®, is a flavonoid composed of glucose moieties attached to a base structure of quercetin. EMIQ® is derived from the Japanese pagoda tree (*Sophora japonica* L.).

High bioavailability

EMIQ® is 17 times more bioavailable than quercetin.



Dec. 2nd 10:00AM - 12:00PM
ICoFF2019-Sponsored Session
"The effects of highly bioavailable quercetin glycoside and curcumin"

Exhibition booth
ICPH2019 & ICoFF2019

Function of EMIQ®

- ☑ Anti-hay fever
- ☑ Anti-hypertensive
- ☑ Anti-arteriosclerotic
- ☑ Improves endothelial function

We also offer many other functional materials.

EMIQ® | Curcumin | Lutein | www.saneigen.com

Since the establishment of San-Ei Gen F.F.I., Inc. in 1911, our mission has been to deliver healthy lifestyles and the pleasure of eating through our food additives. As a member of the UN Global Compact, we continue to pursue the deliciousness and safety of food, as well as contribute to the creation of a sustainable society.

San-Ei Gen F.F.I., Inc.
Passion for food. Compassion for people.

1-1-11, Sanwa-cho, Toyonaka, Osaka 561-8588, JAPAN
Phone +81-6-6333-0521 Fax +81-6-6333-1219

Wellnex
Collagen Peptides

IMPROVEMENT OF HYPERGLYCEMIA

A clinical trial was conducted with diabetes patients by which test subjects, in addition to standard diabetes treatment, were given a 5-10g dose of **Wellnex** over a 12 week period. Improvement was observed in terms of fasting blood sugar (FBS) over time,HbA1c (glycated hemoglobin;an indicator of average blood sugar) and insulin resistance. These results suggest that **Wellnex** are effective when used in conjunction with other medication.

VASCULAR REJUVENATION

Collagen is one of the major substances that comprise blood vessels. By taking in more collagen peptides, it enhance the collagen-formation ability of cells and, by that, restore the suppleness of blood vessels.

In experiments with anti-aging dock, it was found that a daily intake of 2.5g of **Wellnex** over a three month periods led to an improvement in pulse wave velocity (an indicator of atherosclerosis) and a 5-year diminishment in vascular age. These results are suggestive of an atherosclerotic improvement effect.

Clinical Results for Health Support

https://www.nitta-gelatin.co.jp/en/index.html

「試合前に実家に帰ると、母はいつもバランスを考えた食事を用意していてくれます」と乙黒選手は話してくれた。食事って、大切な人へのエールだと思う。がんばれ。負けるな。強いからだになれ。そんな気持ちの側に、いつも寄り添っていたいから。明治は、がんばる人と支え続ける人を、さまざまな「ひとくちの力」で応援します。

POWER!
ひとくちの力

TOKYO 2020

meiji

東京2020オリンピック ゴールドパートナー(乳製品・菓子)

食生活は、主食、主菜、副菜を基本に、食事のバランスを。

小林製薬の サラシア100

特許成分「ネオコタラノール」(特許第4486792号)

10年以上に及ぶ近畿大学薬学総合研究所との共同研究を経て、ようやく製品化に至りました。

1日の目安 3粒

小林製薬　サラシア　検索

許可表示 本品は天然のサラシアを原料とし、ネオコタラノールを含んでいるため、食事に含まれる糖の吸収をおだやかにする働きがあります。食事とともにお飲みいただくことで、食後血糖値の上昇がゆるやかになるので、食後の血糖値が高めの方、食事に含まれる糖質が気になる方に適した食品です。

KOBAYASHI Pharm. Co., Ltd.

スッキリ実感!

舌苔に含まれる カビのフィルム※に着目!

※カビのフィルムとは…カビは白いフィルムを口腔内や舌に作ります。

カビの作り出すフィルムは、口だけではなく、
様々な全身トラブルの原因の1つになりうることが
指摘されています。

帝京大学と
共同開発した独自成分
ドゥーマック
DOMAC 配合

UHA シタクリア

商品ラインナップ

キャンディタイプ

7日分

大粒サイズ

タブレットタイプ

21粒入

大粒サイズ

約50粒入

小粒サイズ

ジェルタイプ

5g×100包入

レモン味の
飲みやすい
ジェルタイプ

※商品の規格変更などにより、製品記載の内容と異なる場合がございます。必ずお手元の製品パッケージの表示をご確認ください。

商品に関するお問い合わせはこちら

UHA 味覚糖

◎味覚糖株式会社お客様相談センター

0120-557-108 土日祝を除く 9:00～17:00

〒639-1031 奈良県大和郡山市今国府町 137-5

UHA シタクリア ホームページ▶ http://www.uha-domac.com

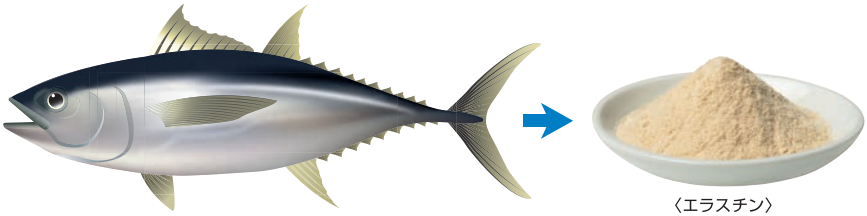
「シーチキン」のはごろもフーズから

マグロ由来の機能性素材

マグロエラスチン

TUNA ELASTIN

マグロを知り尽くした「はごろもフーズ」。
その恵みを余すところなく活かし、
稀少素材「エラスチン」を抽出しました。



〈エラスチン〉

エラスチンの健やかな機能性

中高年層の「気になる」部位にエラスチンが関係！

肌　血管　靱帯　肺

「シーチキン」レベルの安心、安全

良質な原料の仕入れから製品製造まで、はごろもフーズが一環して管理。ご家庭で親しまれているシーチキンの品質そのままに、安心と安全をお届けします。

※シーチキンは、はごろもフーズの登録商標です。

Hagoromo はごろもフーズ
HAGOROMO FOODS CORPORATION

はごろもフーズ株式会社 バイオユニット
〒425-0065 静岡県焼津市惣右衛門字稗島1225-8
TEL.054-623-1391 FAX.054-623-4688