09:00-10:30   Room 10

**[SY(T1)1] Regulation of memory performance and neural plasticity by nutrient factors**

**Chairs:** Satoshi Kida, The University of Tokyo, Japan  
Mauro Costa-Mattioli, Baylor College of Medicine, USA

*Unraveling gut-microbiome-brain interactions*

*Quantitative approach identifies metabolic underpinnings associated with schizophrenia*

*Mechanisms underlying memory impairments by Vitamin B1 deficiency*

Mauro Costa-Mattioli  
Baylor College of Medicine, USA

Takeo Yoshikawa  
RIKEN Center for Brain Science, Japan

Satoshi Kida  
The University of Tokyo, Japan

13:15-14:45   Room 2

**[SY(T1)2] Nutriomic approaches to understand and implement Precision Nutrition**

**Organized by IUNS**

**Chairs:** Caterine Geissler, IUNS, UK  
Helmut Heseker, IUNS, Germany

*Genotype-based nutrition and dietary guidance*

*Genomic and nutrigenomic contributions to plasma triglycerides*

*Integrated omics for applying in food and nutrition sciences*

*Epigenetics and Mediterranean diet*

Martin Kohlmeier  
University of North Carolina, Nutrition Research Institute, USA

Jose Santos  
Chilean Society of Nutrition / Catholic University of Chile, Chile

Hisanori Kato  
The University of Tokyo, Japan

J. Alfredo Martinez  
IUNS, Spain

13:15-15:15   Room 10

**[SY(T1)3] Functions of nutrient-sensing nuclear receptors in health**

**Chairs:** Toshiyuki Sakaki, Toyama Prefectural University, Japan  
Ryoichi Yamaji, Osaka Metropolitan University, Japan

*Retinoic Acid and Its Nuclear Receptors in Health and Disease*

*Vitamin K, GGCX, and SXR*

*Elucidation of molecular mechanism of vitamin D actions using genetically modified rats*

*Targeting the nuclear receptor PPARalpha to treat metabolic disease*

William S. Blaner  
Columbia University, USA

Satoshi Inoue  
Tokyo Metropolitan Institute of Gerontology, Japan

Toshiyuki Sakaki  
Toyama Prefectural University, Japan

Jae Man Lee  
Kyungpook National University School of Medicine, Korea

13:15-15:15   Room 12

**[SY(T1)4] Chrono-nutrition**

**Chairs:** Jonathan David Johnston, University of Surrey, UK  
Masaki Takahashi, Tokyo Institute of Technology, Japan

*Diet timing and chronic disease –epidemiological evidence of chrono-nutrition*

*The human circadian system: links to meal timing and type 2 diabetes*

*Time-Restricted Eating for the Prevention and Treatment of Cardiometabolic Disease*

*Food-log app-based chrono-nutritional survey and intervention reveal effective information on weight loss and sleep*

Gerda K Pot  
King's College London / Nutrition & Healthcare Alliance, Netherlands

Jonathan David Johnston  
University of Surrey, UK

Emily N.C. Manoogian  
Salk Institute for Biological Studies, USA

Yu Tahara  
Hiroshima University, Japan
### Thursday, December 8, 2022

**[SY(T1)5] Enteroendocrine systems that sense nutrients in the gut and control the body**

**Chair:** Tohru Hira, Hokkaido University, Japan

<table>
<thead>
<tr>
<th>Topic</th>
<th>Speaker</th>
<th>Institution</th>
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<tbody>
<tr>
<td>Adaptive changes in nutrient-induced GLP-1 secretion in diet-induced obese model rats</td>
<td>Tohru Hira</td>
<td>Hokkaido University, Japan</td>
</tr>
<tr>
<td>The enteroendocrine system in human health and in gastrointestinal disease</td>
<td>John McLaughlin</td>
<td>University of Manchester, UK</td>
</tr>
<tr>
<td>Cellular and molecular mechanisms in the enteroendocrine system</td>
<td>Frank Reimann</td>
<td>University of Cambridge, UK</td>
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**09:00-10:30 Room 4**

**[SY(T1)6] NZ high-Value nutrition national science challenge - Growing the science to take high-value foods to the world**

**Organized by High-Value Nutrition National Science Challenge**

**Chair:** Joanne Todd, University of Auckland, New Zealand

<table>
<thead>
<tr>
<th>Topic</th>
<th>Speaker</th>
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<tbody>
<tr>
<td>High-Value Nutrition - Growing New Zealand’s Science to Take High-Value Foods to the World</td>
<td>Richard Mithen</td>
<td>University of Auckland, New Zealand</td>
</tr>
<tr>
<td>A New Zealand Diet for Metabolic Health and Family Wellbeing: Participant Insights</td>
<td>Denise Conroy</td>
<td>Plant and Food Research Ltd., New Zealand</td>
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<tr>
<td>Peak Nutrition for Metabolic Health - driving a reduction in pre-diabetes in the Asian consumer</td>
<td>Jennifer Miles-Chan</td>
<td>University of Auckland, New Zealand</td>
</tr>
<tr>
<td>Unlocking the puzzle of functional gut disorders, assessing novel biomarkers targeting gut comfort</td>
<td>Nicole Clemence Roy</td>
<td>University of Otago, New Zealand</td>
</tr>
<tr>
<td>Exploring the immunometabolic response to nutrition</td>
<td>Olivier Gasser</td>
<td>Malaghan Institute for Medical Research, New Zealand</td>
</tr>
<tr>
<td>Feeding through seeding: nourishing the infant microbiome that supports immune health</td>
<td>Clare Rosemary Wall</td>
<td>University of Auckland, New Zealand</td>
</tr>
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**13:15-15:15 Room 4**

**[SY(T1)7] Molecular and neural bases of the nutrition-based feeding decision making**

**Chair:** Tsutomu Sasaki, Kyoto University, Japan

<table>
<thead>
<tr>
<th>Topic</th>
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<th>Institution</th>
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<tbody>
<tr>
<td>Gut-brain pathways that control food intake</td>
<td>Zachary Knight</td>
<td>University of California, San Francisco, USA</td>
</tr>
<tr>
<td>Food Reward and The Gut-Brain Axis</td>
<td>Ivan E De Araujo</td>
<td>Icahn School of Medicine at Mount Sinai, USA</td>
</tr>
<tr>
<td>A Neural Basis Behind the Hardships of Dieting</td>
<td>Michael Krashes</td>
<td>National Institutes of Health, USA</td>
</tr>
<tr>
<td>Neuronal mechanism of state-dependent modulation of taste preference</td>
<td>Ken-ichiro Nakajima</td>
<td>National Institute for Physiological Sciences, Japan</td>
</tr>
</tbody>
</table>

### Friday, December 9, 2022

**[SY(T1)8] Emergence of novel functions of vitamins for the prevention of life-style related diseases**

**Co-organized by The Vitamin Society of Japan**

**Chairs:** Hitoshi Shirakawa, Tohoku University, Japan  
Leon Schurgers, Maastricht University, Netherlands

<table>
<thead>
<tr>
<th>Topic</th>
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<tbody>
<tr>
<td>Anti-obesity and neuroprotective effects of tocotrienols</td>
<td>Koji Fukui</td>
<td>Shibaura Institute of Technology, Japan</td>
</tr>
<tr>
<td>Role of vitamin K in health and disease</td>
<td>Leon Schurgers</td>
<td>Maastricht University, Netherlands</td>
</tr>
<tr>
<td>Niacin metabolism and life-style related diseases</td>
<td>Tsutomu Fukuwatari</td>
<td>The University of Shiga Prefecture, Japan</td>
</tr>
</tbody>
</table>
[SY(T1)9] The importance of protein quality in a sustainable diet
Organized by Riddet Institute, Massey University
Chair: Paul Moughan, Riddet Institute, New Zealand
Overview of recent developments of protein quality methodology
Daniel Tome
Paris-Saclay University, France
Porcine model for routine detection of protein digestibility in humans
Hans H Stein
University of Illinois, USA
New doubly labelled protein method for dietary true ileal amino acid digestibility
Anura Kurpad
St John's Medical College, India
Digestibility of amino acids in foods of India
Kiran Bains
Punjab Agricultural University, India
Digestibility of amino acids in foods of China
Fei Han
Academy of National Food and Strategic Reserves Administration, China

[SY(T1)10] Contribution of Asian scientists to global health and food systems
Organized by SIFBI A*STAR and ASEAN Food and Nutrition Network
Chair: Hitomi Kumagai, Nihon University, Japan
Nutrition surveillance in Japan for sustainable population health
Nobuo Nishi
National Institutes of Biomedical Innovation, Health and Nutrition, Japan
Contribution of Asian Scientists to Global Nutrition
Jeyakumar Henry
ASTAR, Singapore Institute of Food and Biotechnology Innovation, Singapore
Application of nutrition, dietetics and food science in public health interventions in Asia
Sumanto Haldar
Singapore Institute of Food and Biotechnology Innovations (SIFBI), Singapore

[SY(T1)11] Oral health and nutrition: epidemiology, clinical, and social aspects
Chair: Jun Aida, Tokyo Medical and Dental University, Japan
Introduction of oral health: its global burden
Ken Osaka
Tohoku University, Japan
Public health fight against sugar
Richard Geddie Watt
UCL, UK
Epidemiology of oral health on nutrition and food intake
Jun Aida
Tokyo Medical and Dental University, Japan
Clinical effort to improve ingestion and swallowing among disabled older people
Haruka Tohara
Tokyo Medical and Dental University, Japan

[SY(T1)12] Sensory nutrition: Prospects for a new research field
Organized by Monell Chemical Senses Center in Philadelphia USA
Chairs: Robert F. Margolskee, Monell Chemical Senses Center, USA
Yuzo Ninomiya, Research and Development Center for Five-Sense Devices, Kyushu University, Japan
Umami sensing and nutrition
Shizuko Satoh-Kuriwada
Tohoku University, Japan
Low calorie sweeteners; Individual and group efficacy for weight management.
Rick Mattes
Purdue University, USA
Olfactory dysfunction is related to frailty and cognitive dysfunction in the elderly
Takaki Miwa
Kanazawa Medical University, Japan
Changes and Mechanisms of Chronic Psychosocial Stress and Nutritional Preference
Hong Wang
Monell Chemical Senses Center, USA
Saturday, December 10, 2022

**T1: Advances in Nutrition Research**

**09:00-10:30  Room 10**

**[SY(T1)13] Challenges to emergency health and nutrition: Natural disasters and pandemics**

**Chairs:** Emily Ying Yang Chan, The Chinese University of Hong Kong, Hong Kong  
Noriko Sudo, Ochanomizu University, Japan

- Health Emergency and Disaster Risk Management Research and Evidence (tentative)  
  Ryoma Kayano  
  World Health Organization, Japan

- Frontiers in Disaster Nutrition for Nutritional Health Care after Natural Disaster and Pandemics  
  Nobuyo Tsuboyama-Kasaoka  
  National Institutes of Biomedical Innovation, Health and Nutrition, Japan

- Addressing Malnutrition in Humanitarian Emergencies  
  Abigail Perry  
  World Food Programme, Italy

**09:00-10:30  Room 12**

**[SY(T1)14] The role of glycation in the pathogenesis of diseases and its prevention through food constituents**

**Organized by Japanese Maillard Reaction Society (JMARS)**

**Chairs:** Hiroshi Nishida, Nissei Institute of Health Science, Japan  
Kiyotaka Nakagawa, Tohoku University, Japan

- Protein modification by non-enzymatic glycation and its relevance to lifestyle-related diseases  
  Ryoji Nagai  
  Tokai University, Japan

- Novel prevention of disease based on metabolomic aspects on glycation  
  Reiko Inagi  
  The University of Tokyo, Japan

- Glycation reaction and the receptor for advanced glycation end-products (RAGE): foe or friend for life?  
  Yasuhiko Yamamoto  
  Kanazawa University, Japan

**13:15-14:45  Room 12**

**[SY(T1)15] New directions to understand and prevent childhood obesity**

**Organized by Spanish Nutrition Society**

**Chairs:** Angel Gil, University of Granada, Spain  
Luis Moreno, University of Zaragoza / Ibero-American Nutrition Foundation, Spain

- Offspring obesity prevention in pregnancy  
  Elvira Larque  
  University of Murcia, Spain

- Epigenetic mechanisms involved in childhood obesity development  
  Concepcion Aguilera  
  University of Granada, Spain

- Immune system and microbiota in obesity  
  Marcos Ascensión  
  Spanish Scientific Research Council, Spain

- Mediterranean lifestyles protecting children from obesity  
  Luis Moreno  
  University of Zaragoza / Ibero-American Nutrition Foundation, Spain

Sunday, December 11, 2022

**T1: Advances in Nutrition Research**

**09:00-10:30  Room 10**

**[SY(T1)16] Future prospects for food research in the post-microbiome era**

**Chairs:** Jun Kunisawa, National Institutes of Biomedical Innovation, Health and Nutrition, Japan  
Mi-Na Kweon, Ulsan University, Asan Medical Center, Korea

- Postbiotics is a new era for health science  
  Jun Kunisawa  
  National Institutes of Biomedical Innovation, Health and Nutrition, Japan

- Maintenance of gut homeostasis by food and probiotics  
  Mi-Na Kweon  
  Ulsan University, Asan Medical Center, Korea

- The importance of nutrition considering the function of the indigenous microbiota in the gut  
  Shin Kurihara  
  Kindai University, Japan
**[SY(T1)17] Current topics in nutrition of green algae Chlorella**

Organized by Society for Chlorella and Functional Plants Research

**Chairs:** Teruo Miyazawa, Tohoku University, Japan  
Motoni Kadowaki, Niigata Institute of Technology, Japan

**Antioxidant function of Chlorella in our body**  
Teruo Miyazawa  
Tohoku University, Japan

**Capability of Chlorella as a Protein Source**  
Masatoshi Kubota  
Niigata Institute of Technology, Japan

**Immunological Function of Chlorella**  
Masako Toda  
Tohoku University, Japan

**The water extracts from the microalgae (Chlorella pyrenoidosa) can against dengue virus type II (DENV2) infection**  
Yi-Lin Chan  
Chinese Culture University, Taiwan