Human Nutrition, Environment and Health

October 14–18, 2015
China World Hotel | Beijing | China

Scientific Organizers: Martin Kussmann, Hannelore Daniel and Jacqueline Pontes Monteiro

Organized in collaboration with BGI. Part of the Keystone Symposia Global Health Series, supported by the Bill & Melinda Gates Foundation.

Diet is the most important environmental factor for maintaining health and preventing disease. The goals and outcomes of this meeting include: 1) Bringing together researchers from traditionally rather separated disciplines: nutrition, (gen)omics, clinics, physiology, epidemiology, analytics, biomathematics; 2) Advancing nutrition research as a quantitative, holistic and molecular science; 3) Reviewing/challenging classical pre-clinical models and clinical study designs and incorporating improved translational in vitro and in vivo models, human intervention study designs, and innovative new tools/technologies for molecular phenotyping and capture of human diet and lifestyle; and 4) Connecting basic laboratory science to patient- and consumer-relevant outputs in terms of personalized dietary/nutritional counseling and monitoring/diagnostics.

Session Topics:
- The Interaction between Human Genome, Diet and Environment
- Translational Models for Human Nutrition and Health
- Human Nutritional and Lifestyle Interventions
- Capturing and Monitoring Human Individuality
- From Nutrigenomics to Systems Nutrition
- Nutrition 2.0 – Translation into Solutions for Human Health
- Global Nutrition and Sustainability
- Joint Session with Grand Challenges and Keystone Symposia plus one workshop

Note that special subsidized registration rates are available to meeting participants in China.

Special registration rates are available for participants in China. Note that abstracts can continue to be submitted online through the discounted registration deadline, and you can register up until the meeting begins.

Discounted Registration Deadline: September 10, 2015

For additional details, visit www.keystonesymposia.org/15T1.
**KEYSTONE SYMPOSIA**

**Human Nutrition, Environment and Health (T1)**

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**WEDNESDAY, OCTOBER 14**

**Arrival and Registration**

**THURSDAY, OCTOBER 15**

**Welcome and Keynote Address**

* Martin Kussmann, Diabetes Center Bern, Switzerland
  * Jacqueline Pontes Monteiro, Universidade de São Paulo, Brazil
  * Hannelore Daniel, Technische Universität München, Germany
  José M. Ordovás, Tufts University, USA

**Human Health, Genes and Diet**

The Interaction between Human Genome, Diet and Environment

* Martin Kussmann, Diabetes Center Bern, Switzerland
  * Claudio Franceschi, University of Bologna, Italy
  * Leroy E. Hood, Institute for Systems Biology, USA
  * Liping Zhao, Shanghai Jiao Tong University, China and Rutgers University, USA
  * Alexander M. Vaiserman, Institute of Gerontology, Ukraine

**Translational Models for Human Nutrition and Health**

* Kendal Hirschi, Baylor College Medicine, USA
  * Vijayalakshmi Varma, National Center for Toxicological Research, USA
  * Aldons J. Lusis, University of California, Los Angeles, USA
  * Patrick J. Stover, Cornell University, USA
  * Sumei Hu, Institute of Food and Health, University College Dublin, Ireland

**Poster Session 1**

**FRIDAY, OCTOBER 16**

**Human Nutritional and Lifestyle Interventions**

* Patrick J. Stover, Cornell University, USA
  * Hannelore Daniel, Technische Universität München, Germany
  * Ben van Ommen, TNO, Netherlands

Jacqueline Pontes Monteiro, Universidade de São Paulo, Brazil

The Genomics of Micronutrient Requirements

Robert Zeigler, IRRI, USA

Rice as a Tool to Improve Nutrition for the World’s Poor

Marie-Pier Scott-Boyer, University of Trento COSBI, Italy

Short Talk: Network-Based Analysis of Cofactor-Protein Interactions in Nutrition and Complex Diseases

Namita Parikshit Mahalle, Deenanath Mangeshkar Hospital and Research Center, India

Short Talk: A Study of Nutritional Factors and its Relation with Insulin Resistance and Inflammatory Markers in Patients with Coronary Artery Disease in Indian Population

**Capturing and Monitoring Human Individuality**

* Chris Evelo, Maastricht University, Netherlands
  * Qiang Tian, USA
  * Rui Chen, Stanford University, USA
  * Rick Weiss, Viocare, Inc, USA
  * Karsten Hiller, University of Luxembourg, Luxembourg

Short Talk: Combining Dried Blood Spots with Stable-Isotope Tracers to Profile Dynamics of Glucose Metabolism in Human Subjects

**SATURDAY, OCTOBER 17**

**From Nutrigenomics to Systems Nutrition**

* Jim Kaput, Nestlé Institute of Health Sciences, Switzerland
  * Martin Kussmann, Diabetes Center Bern, Switzerland
  * Lorraine Brennan, University College Dublin, Ireland
  * Mariana Radonjic, EdgeLeap, Netherlands
  * Paloma K. Barrera, INMEGEN, Mexico

From Disconnected Data to Emerging Insights: Unraveling Complexity of Food-Health Interactions

**Nutrition 2.0 - Translation into Solutions for Human Health**

* Jacqueline Pontes Monteiro, Universidade de São Paulo, Brazil
  * Juan B. Ochoa Gautier, Nestle Health Science S1216, USA
  * Xu Lin, Shanghai Institutes for Biological Sciences Chinese Academy of Sciences, China
  * Maria-Carlota Dao, Institute of Cardiometabolism and Nutrition, ICAN, France

Personalized Nutrition in Critical Care

Genetic Variants, Nutrient-Related Biomarkers on Metabolic Diseases in Chinese

Gut Microbiota and Cardiometabolic Risks

* Program subject to change. Meal formats are based on meeting venue.

For the most up-to-date details, visit [https://www.keystonesymposia.org](https://www.keystonesymposia.org).
Michael Fenech, CSIRO Food and Nutrition, Australia
Short Talk: Plasma Micronutrient Levels and Telomere Length in Children

Godfrey Oakley, Emory University, USA
Epidemic Folic Acid Preventable Spina Bifida and Anencephaly--Important Preventable Contribution to Perinatal, Neonatal, Infant and Under 5 Child Mortality

Daniel L. Marks, Oregon Health & Science University, USA
A Comprehensive Approach to Healthy Birth, Growth and Development

**SUNDAY, OCTOBER 18**

**Poster Session 2**

Global Nutrition and Sustainability
*Ben van Ommen*, TNO, Netherlands
Jim Kaput, Nestlé Institute of Health Sciences, Switzerland
Nina V. Fedoroff, Pennsylvania State University, USA
Panel Discussion: Perspectives and Needs for research in the Food, Diet and Health Relationship
*Martin Kussmann*, Diabetes Center Bern, Switzerland
Jim Kaput, Nestlé Institute of Health Sciences, Switzerland
Ben van Ommen, TNO, Netherlands
Lorraine Brennan, University College Dublin, Ireland
Claudio Franceschi, University of Bologna, Italy

Meeting Wrap-Up: Outcomes and Future Directions (Organizers)

Workshop
*Jacqueline Pontes Monteiro*, Universidade de São Paulo, Brazil
G. Bhanuprakash Reddy, National Institute of Nutrition, India
Padmapriyadarsini Chandrasekaran, National Institute for Research in Tuberculosis, India
Neil A. Hanchard, Baylor College of Medicine, USA
Shuxin Han, Case Western Reserve University, USA
Efrat Monsonego Ornan, Hebrew University of Jerusalem, Israel
Abena S. Amoah, Noguchi Memorial Institute for Medical Research, Ghana
Edwin Andres Higuita, Corporación Universitaria Remington, Colombia
Pieter Johan Giesbertz, Technische Universität München, Germany

**MONDAY, OCTOBER 19**

**Departure**