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.
**KEystone Symposia**  
**on Molecular and Cellular Biology**  
**Human Nutrition, Environment and Health (T1)**  
**October 14-18, 2015 • China World Hotel • Beijing, China**  
**Scientific Organizers:** Martin Kussmann, Hannelore Daniel and Jacqueline Pontes Monteiro  
**Organized in collaboration with BGI. Sponsored by Nestlé Institute of Health Sciences. Part of the Keystone Symposia Global Health Series,** supported by the Bill & Melinda Gates Foundation.

**Global Health Travel Award Deadline:** May 12, 2015 / **Abstract & Scholarship Deadline:** June 16, 2015 / **Abstract Deadline:** July 14, 2015 / **Discounted Registration Deadline:** September 10, 2015

**Wednesday, October 14**  
**Arrival and Registration**

**Thursday, October 15**  
**Welcome and Keynote Address**  
* Martin Kussmann, Frontiers Media, 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, Frontiers Media, Switzerland  
Claudio Franceschi, University of Bologna, Italy  
* Genes and Environment for Human Longevity  
* Leroy E. Hood, Institute for Systems Biology, USA  
Systems Medicine and Proactive P4 Medicine: Transforming Healthcare and Nutrition through Wellness  
* Liping Zhao, Shanghai Jiao Tong University, China and Rutgers University, USA  
Dietary Modulation of Gut Microbiota for Obesity Management: From Association to Causation to Translation  
* Alexander M. Vaiserman, Institute of Gerontology, Ukraine  
Short Talk: Developmental Nutritional Programming of Type 2 Diabetes: Evidence from the Ukraine Famine of 1932-1933

**Translational Models for Human Nutrition and Health**  
* Kendal Hirschi, Baylor College Medicine, USA  
Vijayalakshmi Varma, National Center for Toxicological Research, FDA, USA  
Adipocyte Responses to Fructose: A Characterization Using Systems Biology Approaches  
* Aldons J. Luis, University of California, Los Angeles, USA  
Systems Genetics Analysis of Host-Gut Microbiota Interactions  
* Patrick J. Stover, Cornell University, USA  
In Search of a Common Pathway for Folic Acid-Responsive Neural Tube Defects, Neurodegeneration and Cancer  
* Sumei Hu, Institute of Food and Health, University College Dublin, Ireland  
Short Talk: The Impact of Milk Derived Bioactives on Glycemic Management

**Poster Session 1**

**Friday, October 16**  
**Human Nutritional and Lifestyle Interventions**  
* Patrick J. Stover, Cornell University, USA  
Hannelore Daniel, Technische Universität München, Germany  
* Characterising Normal Human Metabolism  
Ben van Ommen, TNO, Netherlands  
Diet, Systems Flexibility and My Optimal Health  

**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 Centre for Computational Biol, 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  
Wellness, Diseases and P4 Medicine  
Rui Chen, Stanford University, USA  
Longitudinal Omics in Humans  
Rick Weiss, Viocare, Inc, USA  
Self-Monitoring of Diet and Lifestyle  
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, Frontiers Media, Switzerland  
Omics-Rooted Systems Studies of Human Phenotypes  
Lorraine Brennan, University College Dublin, Ireland  
Metabotyping in Nutrition Research  
Marijana Radonjic, EdgeLeap, Netherlands  
From Disconnected Data to Emerging Insights: Unraveling Complexity of Food-Health Interactions  
* Paloma K. Barrera, INMEGEN, Mexico  
Short Talk: Antioxidant-Related Gene Expression Changes by Cocoa Polyphenols Intake  
* Xiaoie Tan, Waters, China  
Short Talk: Markers of Health: Molecular Phenotyping Unveils the Healthy Biosignature of “Omega-3” Transgenic Mice

**Nutrition 2.0 - Translation into Solutions for Human Health**  
* Jacqueline Pontes Monteiro, Universidade de São Paulo, Brazil  
Juan B. Ochoa, Nestlé Health Science, USA  
Personalized Nutrition in Critical Care  
* Xu Lin, Shanghai Institutes for Biological Sciences Chinese Academy of Sciences, China  
Genetic Variants, Nutrient-Related Biomarkers on Metabolic Diseases in Chinese
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**Poster Session 2**

**SUNDAY, OCTOBER 18**

**Global Nutrition and Sustainability**

*Ben van Ommen*, TNO, Netherlands  
Enabling Nutrient Security and Sustainability through Systems Research  

*Nina V. Fedoroff*, Pennsylvania State University, USA  
The Safety, Nutritional Value, and Sustainability of Organically and Conventionally Grown Food  

**Panel Discussion: Perspectives and Needs for research in the Food, Diet and Health Relationship**

*Martin Kussmann*, Frontiers Media, 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  
Influence of Micronutrients on Biochemical Pathways Involved in Diabetic Complications  

*G. Bhanuprakash Reddy*, National Institute of Nutrition, India  
Dietary Intake, Nutritional Status and Relationship to Serum Lipids among Antiretroviral Naive HIV-Infected Children in South India  

*Neil A. Hanchard*, Baylor College of Medicine, USA  
DNA Methylation Changes in Severe Childhood Malnutrition  

*Shuxin Han*, Case Western Reserve University, USA  
Circadian Control of Bile Acid Synthesis by a KLF15-Fgf15 Axis  

*Efrat Monsonego Ornan*, Hebrew University of Jerusalem, Israel  
Nutritional Aspects of Skeletal Development  

*Abena S. Amoah*, Noguchi Memorial Institute for Medical Research, Ghana  
Breastfeeding Duration and Asthma in Urban Schoolchildren in Ghana  

*Edwin Andres Higuita*, Corporación Universitaria Remington, Colombia  
Immunomodulation of T Cells Subpopulations and NK Cells in Elderly Adults during a 12 Weeks Intervention with a Nutritional Complement Enriched with Biotechnologically Ganoderma lucidum Extracted Beta Glucans (ISRCTN 53126301)

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**Pieter Johan Giesbertz**, Technische Universität München, Germany  
Metabolic Signatures of Obesity and Diabetes Revealed in Corresponding Genetic Mouse Models  

**Joint Session with Grand Challenges and Keystone Symposia**

**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  

**MONDAY, OCTOBER 19**

**Departure**

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* Session Chair † Invited but not yet accepted  
Program current as of November 18, 2018. Program subject to change. Meal formats are based on meeting venue.  
For the most up-to-date details, visit [www.keystonesymposia.org/16T1](http://www.keystonesymposia.org/16T1).