

## 6<sup>th</sup> European Summer School on Nutrigenomics

### OMICS APPROACHES TO EARLY LIFE PROGRAMMING OF ADULT HEALTH

Fabriano, Paper and Watermark Museum, Fabriano (AN)  
16-19 June 2026

**16 June 2026**

**14:00** Registration

**14:45** Welcome

**15:00-18:00 - Transcriptomics in Brain Development**

**Chairs: Torsten Plosch and Omry Koren**

**15:00-15:45 Katharina Gapp**, Department of Health Sciences and Technology, Lab of Epigenetics and Neuroendocrinology, ETH Zurich

*Stress and its sequel: shaping brain health across the lifespan and beyond*

**15:45-16:30 Ina Bergheim**, Department of Nutritional Sciences, University of Vienna

*Alcohol consumption during adolescence and early adulthood as trigger of old age cognitive decline*

*16:30-17:00 Coffee break*

*Selected oral talk*

**17:00-17:20 Chiara Galli**, *Characterization of the leptin-oxytocin crosstalk during early postnatal development and after early life stress*

*Flash Talks*

**17:20-17:25 Shailendra Kumar Gangwar**, *EARLYMAP: Multi-Omics Integration for Early Prediction of Cognitive Impairment using a Machine Learning Approach*

**17:25-17:30 Nerea Diéguez-Martín**, *Nutritional modulation of miRNAs in cognitive decline and dementia: a systematic review of preclinical and clinical studies*

**17:30-17:35 Laura Panisello**, *Nutrigenomic modulation of brain function by nut consumption through cross-tissue microRNA regulation in Alzheimer's disease*

**17:35-17:40 Joanna Ratajczak**, *Time-Dependent Cognitive and Neurotrophic Effects of Resistance Training and Dance-Based Exercise Programs: A Pilot Study*

**17:40-18:00 Questions and Discussion**

*18:00 Welcome party networking*

*18:30 Cultural event: Visit Museum of Paper and Watermark*

17 June 2026

**09:00-18:00 - Epigenomics in Developmental Origins of Health and Disease**

**Chairs: Ina Bergheim and Lior Lobel**

**9:00-9:45 Torsten Plosch**, Department of Human Medicine, Division of Perinatal Neurobiology, School of Medicine and Health Science, Carl von Ossietzky Universität Oldenburg

*Epigenomic discoveries in a pediatric population – lessons from the first 1000 days and beyond.*

**09:45-10:30 Rob Waterland**, Baylor college, Baylor College of Medicine/USDA/ARS Children's Nutrition Research Center

*An Opportunity to Accelerate Progress in Epigenetic Epidemiology of DOHaD*

*10:30-11:00 Coffee break*

*Selected oral talk*

**11:00-11:20 Chloe Chauvel**, *Early-life programming of overweight: new insights into the effects of maternal overweight and neonatal colostrum intake from a longitudinal canine cohort*

**11:20-11:40 Diana André**, *Nutrigenomic Regulation of Male Fertility: The Role of SIRT6 and Acetyl-lysine Profiles in Response to Caloric Restriction and GLP-1*

**11:40-12:00 Pratibha Gupta**, *Integrating Nutrigenomics and Bioelectrical Impedance Analysis for Precision Obesity Prevention*

*Flash Talks*

**12:00-12:05 Ranjini Ghosh Dastidar**, *Dynamic System Identification from Longitudinal Vitamin D Perturbations Reveals Regulatory Control Architecture of Interindividual Responsiveness*

**12:05-12:10 Seyedalireza Kasaiyan**, *Effect of the use of cooked chickpea as partial meat replacer and banana pseudostem as fibre source on the composition and microbial changes of vacuum packaged cooked sausages*

**12:10-12:15 Tanya Tripathi**, *Vitamin D supplementation induces regimen-specific immune programs in multiple sclerosis: a multi-omics study*

**12:15-12:20 Alba Ciattaglia**, *Impact of Vitamin D Supplementation on Aromatase Inhibitor-Induced Musculoskeletal Symptoms: A Systematic Review and Meta-Analysis Incorporating the DOHaD Perspective*

**12:20-12:25 Mary Agwai**, *The impact of single nucleotide polymorphism (rs9939609) on BMI: a systematic review with meta-analysis*

**12:25-12:30 Georgiana Ioana Benche**, *From Nutrient Signals to Epigenetic Memory: Early-Life Metabolic Programming of Adult Disease*

**12:30-12:35 Ewa Bryl**, *Effects of a 6-Month Exercise Program on Incretin and Appetite-Regulating Hormones in Women Aged  $\geq 50$ : A Pilot Study*

**12:35-12:40 Anindhita Syahbi Syagata**, Association of Childhood Stunting with Obesity and Stunting in Adolescence in Yogyakarta, Indonesia

**12:40-13:00 Questions and Discussion**

**13:00-14:30 Lunch**

**Chairs: Katharina Gapp and Nissan Yissachar**

**14:30-15:15 Raffaele Teperino**, Institute of Experimental Genetics - Helmholtz Diabetes Center  
*The intergenerational impact of paternal preconceptional health*

**15:15- 16:00 Wim Van der Berghe**, Department Biomedical Sciences - University Antwerp  
*Chicken or egg: unveiling diet related transcription factor drivers and passengers in epigenetic age acceleration in Metabolic dysfunction associated liver disease (MASLD) and Alzheimer's disease*

**16:00- 16:30 Coffee Break**

**Selected oral talk**

**16:30-16:50 Xiang Yuyao**, The impact of gestational diabetes mellitus on pancreatic development in mice

**16:50-17:10 Alice Ricco**, Association of plant-based protein intake with epigenetic age deceleration in the Netherlands Twins Register

**17:10-17:30 Barbara Hugonin**, Integrated Nutritional and Microbiota-Targeted Intervention in Infants with Inborn Errors of Metabolism: Clinical Outcomes and Implications for Neurodevelopment and Hepatic Toxicity

**17:30-17:50 Elona Hasalla**, Breastfeeding and Early-Life Metabolic Programming: A Nutrigenomic and Public Health Perspective from Albania

**Flash Talks**

**17:50-17:55 Asmita Mukundrao Acharya**, Hesperetin from Mediterranean Diet Citrus Fruits Modulates Metabolic Activity in an In Vitro Hepatic Cell Model under Inflammatory, Hormonal and Oxidative Stress

**17:55-18:00 Zuzanna Margas**, Fasting modifies changes in TMAO and Tryptophan metabolites levels.

**18:00-18:05 Karen Fransen**, The interplay between plant-forward diets, maternal micronutrient status, and infant immune development: study design of an innovative cohort

**18:05-18:10 Martin Horní**, MASLD progression alterations of glutathione peroxidase 7 expression

**18:10-18:15 Pieter De Clercq**, The Function of Bile Salts in Host-Microbe Crosstalk

**18:15-18:30 Questions and Discussion**

18 June 2026

**09:00-18:00 - Microbiomics and Gut Health**

**Chairs: Liza Konnikova and Rob Waterland**

**9:00-9:45 Omry Koren**, *Azrieli Faculty of Medicine, Bar-Ilan University*

*How the gut microbiome in pregnancy and infancy influences lifelong health*

**9:45-10:30 Nicola Segata**, *Department of Cellular, Computational and Integrative Biology - CIBIO University of Trento*

*Baby-to-baby strain transmission shape the developing gut microbiome*

*10:30-11:00 Coffee break*

*10:50 Group Photo*

*Selected oral talk*

**11:00-11:20 Lucia Occhigrossi**, *Modelling Early-Life Gut–Brain Interactions Using iPSC-Derived Neural Systems*

**11:20-11:40 Fatemeh Mansouri**, *Bifidogenic Effects of Supplemented Infant Formulas: Evidence from a Systematic Review and Network Meta-Analysis of Randomized Controlled Trials*

**11:40-12:00 Christian Giommi**, *Multi-Omics Insights into Probiotic Mitigation of Bisphenol A–Induced Liver and Gut Alterations*

*Flash Talks*

**12:00-12:05 Rucci Chiara**, *Antioxidant activity and intestinal effects of digested Matcha tea and probiotic yeast, alone and in combination, in an intestinal epithelium model: a nutrigenomics approach*

**12:05-12:10 Feliziani Giulia**, *Processing strategies to enhance the nutritional quality and intestinal response of pigmented wheat porridges for early-life nutrition*

**12:10-12:15 Junior Carlone**, *Beyond the Season Effect: Individual Microbiome Identity and a Novel Performance Metric in Elite Volleyball Athletes*

**12:15-12:20 Ellie Foster**, *Elucidating the mechanisms underlying the gut healing potential of gut-derived bacterial isolates*

**12:20-12:40 Questions and Discussion**

*12:40-14:30 Lunch*

**Chairs: Baukje de Roos and Raffaele Teperino**

**14:30 – 15:15 Nissan Yissachar**, *Bar-Ilan University*

*Modeling Host–Microbiome Cross-Talks On-a-Chip: Molecular Insights into Early-Life Gut Programming*

**15:15- 16:00 Lior Lobel, Bar-Ilan University**  
*Metaproteomic Investigations into Diet-Host-Microbe Interactions*

*16:00 Cultural event in Fabriano*

*19:30 Gala dinner - Chiostro San Benedetto, Fabriano*

**19 June 2026**

**09:00-12:00 - Metabolomics and lipidomics in Neonatal Nutrition**  
**Chairs: Wim Van der Berghe and Nicola Segata**

**9:00-9:45 Liza Konnikova, Yale University School of Medicine**  
*Development of placental immunity, metabolomics and immunopeptidomics.*

**9:45-10:30 Baukje de Roos, Human Nutrition, The Rowett Institute, University of Aberdeen**  
*Using metabolomic and lipidomic tools to assess the role of early diets on neurodevelopmental and cardiometabolic outcomes in later life.*

*10:30-11:00 Coffee break*

**11:00-11:45 Carla Ferreri, CNR**  
*Precision Nutrition in Action: How PUFAs, Nutrigenomics, and Membrane Lipidomics Orchestrate Neonatal Health*

**11:45-12:00 Best Oral and Best short talk awards and Zanichelli Awards**

**12:00 Farewell**