



Scuola di Scienze del Farmaco e dei Prodotti della Salute



**nutriGenomics**  
summer school  
UNICAM



**Città di Fabriano**



**FABRIANO**  
City of Crafts and Folk Art  
Designated UNESCO  
Creative City in 2013

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

# OMICS APPROACHES TO EARLY LIFE PROGRAMMING OF ADULT HEALTH

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

### 16 June 2026

14:00 Registration

14:45 Welcome

15:00 **Transcriptomics in Brain Development**  
Chairs: **Torsten Plosch** and **Omyr Koren**

15:00 **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 **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 Coffee break

#### Selected oral talk

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

#### Flash Talks

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

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

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

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

17:40 Questions and Discussion

18:00 Welcome party networking

18:45 Cultural event:  
Visit Museum of Paper and Watermark

### 17 June 2026

09:00 **Epigenomics in Developmental Origins of Health and Disease**  
Chairs: **Ina Bergheim** and **Lior Lobel**

09:00 **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 **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 Coffee break

#### Selected oral talks

11:00 **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 **Diana André**, Nutrigenomic Regulation of Male Fertility: The Role of SIRT6 and Acetyl-lysine Profiles in Response to Caloric Restriction and GLP-1

#### Flash Talks

11:40 **Ranjini Ghosh Dastidar**, Dynamic System Identification from Longitudinal Vitamin D Perturbations Reveals Regulatory Control Architecture of Interindividual Responsiveness

11:45 **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

11:50 **Tanya Tripathi**, Vitamin D supplementation induces regimen-specific immune programs in multiple sclerosis: a multi-omics study

11:55 **Alba Ciattaglia**, Impact of Vitamin D Supplementation on Aromatase Inhibitor-Induced Musculoskeletal Symptoms: A Systematic Review and Meta-Analysis Incorporating the DOHAD Perspective

12:00 **Mary Agwai**, The impact of single nucleotide polymorphism (rs9939609) on BMI: a systematic review with meta-analysis

12:05 **Georgiana Ioana Benche**, From Nutrient Signals to Epigenetic Memory: Early-Life Metabolic Programming of Adult Disease

12:10 **Ewa Bryl**, Effects of a 6-Month Exercise Program on Incretin and Appetite-Regulating Hormones in Women Aged ≥50: A Pilot Study

12:15 **Anindhita Syahbi Syagata**, Association of Childhood Stunting with Obesity and Stunting in Adolescence in Yogyakarta, Indonesia

12:20 Questions and Discussion

12:40 Lunch

Chairs: **Carla Ferreri** and **Nissan Yissachar**

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

15:15 **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 Coffee Break

#### Selected oral talks

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

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

17:10 **Agnieszka Bartoszek**, Digestion and absorption of dietary nucleic acids: the understudied area concerning an abundant food component with a variety of nutritional effects

#### Flash Talks

17:30 **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

17:35 **Zuzanna Margas**, Fasting modifies changes in TMAO and Tryptophan metabolites levels.

17:40 **Karen Fransen**, The interplay between plant-forward diets, maternal micronutrient status, and infant immune development: study design of an innovative cohort

17:45 **Martin Horní**, MASLD progression alterations of glutathione peroxidase 7 expression

17:50 **Pieter De Clercq**, The Function of Bile Salts in Host-Microbe Crosstalk

17:55 Questions and Discussion

### 18 June 2026

09:00 **Microbiomics and Gut Health**  
Chairs: **Liza Konnikova** and **Rob Waterland**

09:00 **Omyr Koren**, Azrieli Faculty of Medicine, Bar-Ilan University  
How the gut microbiome in pregnancy and infancy influences lifelong health

09:45 **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 Coffee break

10:50 Group Photo

#### Selected oral talks

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

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

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

#### Flash Talks

12:00 **Rucci Chiara**, Nutrigenomic insights into matcha tea and probiotic interactions

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

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

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

12:20 Questions and Discussion

12:40 Lunch

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

14:30 **Nissan Yissachar**, Bar-Ilan University  
Modeling Host-Microbiome Cross-Talks On-a-Chip: Molecular Insights into Early-Life Gut Programming

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

16:00 Coffee break

16:30 Cultural event in Fabriano

19:30 Gala dinner - Chiostro San Benedetto

### 19 June 2026

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

09:00 **Liza Konnikova**, Yale University School of Medicine  
Development of placental immunity, metabolomics and immunopeptidomics

09:45 **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 Coffee break

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

11:45 Best Oral and Best short talk awards and Zanichelli Awards

12:00 Farewell

**OPEN BADGE**

