



DIPARTIMENTO DI FARMACIA E BIOTECNOLOGIE

Life & Chemical Sciences Seminars

Challenges & opportunities in systems biology approaches to nutrition research

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(ospite Prof. M. Candela)

Abstract

Systems biology approaches have been increasingly employed in clinical studies to enhance our understanding of the role of genetics, environmental factors and their interactions on nutritional, health and disease status. Metabolic phenotyping is now a well-established approach to define population subgroups based on the monitoring of a wide range of biochemical compounds. Metatypes reflect systemic influences on molecular regulatory processes, including the influence of the diet and the gut ecosystem. The aim of this lecture is to evaluate promising insights towards understanding metabolism of children and obese adults and their peculiar unmet metabolic and nutritional requirements. Herein, we will illustrate current examples, challenges and perspectives in the applications of metabolic health research in obese populations and adolescents.

Biosketch

Francois-Pierre Martin, PhD, is senior project leader and principal investigator in Nutrition and Metabolic Health at the Nestlé Institute of Health Sciences (NIHS), Lausanne, Switzerland. He received his Ph.D. in biochemistry and metabonomics from Imperial College London, UK in 2006, and has a background in biotechnology and microbiology from the engineering school Polytech-Marseille, France. From 2006 to 2012, François-Pierre had contributed to the extension of the fields of metabonomics to nutrition and gut microbiota research for health and disease management at the Nestlé Research Center, Switzerland. Since 2012, he joined the NIHS where his main research interests include gastrointestinal health, metabolic health, and the study of the underlying mechanisms of action of bioactives in paediatric and adult populations. This research helps in identifying new targets for nutraceutical and therapeutical applications. Dr. Martin is author of multiple research papers published in internationally peer-reviewed journals, books and patents.

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