PART 1 DIGESTION AND ADSORPTION OF FOOD COMPONENTS

Oral physiology, mastication and food perception
A van der Bilt, University Medical Center Utrecht, The Netherlands

Gut microbial ecology
H J Flint, S H Duncan and P Louis, Rowett Institute of Nutrition and Health, UK

Digestion and absorption of lipids
D Lairon, Université de la Méditerranée, France

Physicochemical basis of the digestion and absorption of triacylglycerol
C M Lo and P Tso, University of Cincinnati, USA

Non-starch polysaccharides in the gastrointestinal tract
A C Ouwehand, K Tiihonen, H Mäkeläinen and N Rautonen, Danisco, Finland, O Hasselwander, Danisco, UK and G Sworn, Danisco, France

Digestion and absorption of proteins and peptides
P J Moughan, Massey University, New Zealand

Digestion and absorption of lipophilic food micronutrients (vitamins A, E, D and K, carotenoids and phytosterols)
M J Amiot-Carlin, INSERM, France
Bioavailability and metabolism of phenolic compounds and glucosinolates
F A Tomás-Barberán, A Gil-Izquierdo, D A Moreno, CEBAS-CSIC, Spain

Developing effective probiotic products: bioavailability and other factors
S Lahtinen, N Rautonen and A Ouwehand, Danisco, Finland, A Henrikson, Danisco, Singapore and P Steele, Danisco, USA

PART 2 ADVANCES IN RESEARCH METHODS TO STUDY FOOD SENSORY PERCEPTION, DIGESTION AND ABSORPTION

Measuring the oral behaviour of foods
I A M Appelqvist, CSIRO, Australia

Measurement and simulation of flavour release from foods
A J Taylor, University of Nottingham, UK

Improving in vitro simulation of the stomach and intestines
K Venema, R Havenaar and M Minekus, TNO Quality of Life, The Netherlands

The use of Caco-2 cells in defining nutrient bioavailability: application to iron bioavailability of foods
R Glahn, Cornell University, USA
Introduction. Origin of the Caco-2 cell line. In vitro measurement of iron bioavailability. The physiology of the in vitro digestion/Caco-2 model. Validation of the in vitro digestion/Caco-2 cell culture model: comparison to human studies of Fe availability. Justification for use of the in vitro digestion/Caco-2 cell model as a screening tool. Conclusion. References.

Techniques for assessing the functional response to food of the stomach and small and large intestine
R Spiller, P Gowland and L. Marciani, University of Nottingham, UK

Advances in the use of animal models for analysing intestinal cancers and protective effects of dietary components
H Xiao, University of Massachusetts, USA

Using stable isotopes to determine mineral bioavailability of functional foods
S A Abrams, Baylor College of Medicine and Texas Children's Hospital, USA

PART 3 IMPLICATIONS

Optimising the flavour of low-fat foods
S Bayarri and E Costell, Instituto de Agroquímica y Tecnología de Alimentos. CSIC, Spain

Design of foods for the optimal delivery of basic tastes
G J van den Oever, J Busch, E van der Linden, G Smit and N J Zuidam, Unilever R&D, The Netherlands

Oral processing and perception of food emulsions: relevance for fat reduction in food
G A van Aken and E H A de Hoog, TI Food and Nutrition and NIZO Food Research and Wageningen University and Research Centre, The Netherlands

Controlling lipid bioavailability using emulsion-based delivery systems
D J McClements and E Decker, University of Massachusetts, USA

Controlling the delivery of glucose in foods
G Zhang, Jiangnan University, China, Z Ao and B R Hamaker, Purdue University, USA

Protein micro/nano particles for controlled nutraceutical delivery in functional foods
L Chen, University of Alberta, Canada
Self-assembling structures in the gastrointestinal tract
T J Foster, University of Nottingham and I T Norton, University of Birmingham, UK

Designing foods to induce satiation: a flavour perspective
R M A J Ruijschop, K M M Burseg, T T Lambers and J Overduin, NIZO food research, The Netherlands

Health food product composition, structure and bioavailability
G S M J E Duchateau and W Klaffke, Unilever R&D, The Netherlands

Coenzyme Q10: functional benefits, dietary uptake and delivery mechanisms
I Amar-Yuli, A Aserin and N Garti, The Hebrew University of Jerusalem, Israel