

Enzymes in Sustainable Food Production – A Lean Green Approach –



Time **Tuesday, 11 June 2013**

Session 1: Design of sustainable processes. Chair: Professor Costantinos Georgiou

- 09:00 Onsite Registration
- 09:30 *Welcome & Opening*
Constantinos Georgiou (Agricultural University of Athens) &
Karsten Olsen (University of Copenhagen)
- 09:40 Keynote lecture: *Sustainability in food production through micro- and nano-cellulose biotechnology development*,
by Athanasios Koutinas (University of Patras)
- 10:25 Guest lecture: *Towards genome-wide sensor arrays for toxicants' detection*
by Shimshon Belkin (University of Jerusalem)
- 11:10 **Break**
- 11:30 LeanGreenFood lecture: *Development of microbial biosensors for food processing*
by Justyna Lukasiak (Agricultural University of Athens, University of Copenhagen)
- 11:50 LeanGreenFood lecture: *Towards green food quality control. Fluidic automation technologies*
by Lucyna Lekawska-Andrinopoulou (Agricultural University of Athens)
- 12:10 LeanGreenFood lecture: *Enzyme engineering to improve glucose oxidase stability*
by Nicole Roupain (Consejo Superior de Investigaciones Científicas - CSIC)
- 12:30 **Lunch**
- 13:45 LeanGreenFood lecture: *Enzyme activity measurement via spectral evolution profiling and multiway chemometrics*
by Andreas Baum (FOSS Analytical, Technical University of Denmark)
- 14:05 LeanGreenFood lecture: *Development and applications of novel immuno-glycoarrays for high-throughput screening of glycosyl hydrolase activities*
by Silvia Vidal Melgosa (University of Copenhagen)
- 14:25 LeanGreenFood lecture: *Enzymatic fingerprinting of pectin*
by Kok-Phen Yan (University of Southern Denmark)
- 14:45 *Session summary* by Constantinos Georgiou (Agricultural University of Athens)
- 14:55 **Break**

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Session 2: Chemistry reduction. Chair: Professor Jørn Dalgaard Mikkelsen

- 15:25 Guest lecture: *Enzyme development for food and feed applications*
by Rune Monrad (Novozymes)
- 16:10 Guest lecture: *Structural dissection of the catalytic site of *Thermotoga maritima* β -galactosidase to determine key residues in the synthesis of prebiotic galacto-oligosaccharides*
by David Talens-Perales (Consejo Superior de Investigaciones Científicas - CSIC)
- 16:30 Guest lecture: *Enzymatic methods of analysis based on flow injection analysis and zone fluidics*
by Paris Tzanavaras (Aristotle University of Thessaloniki)
- 16:50 LeanGreenFood lecture: *Enzymes for opening biomass*
by Tao Feng (Technical University of Denmark)
- 17:10 LeanGreenFood lecture:
Application of enzymes for extraction of lime pectin with functional properties
by Malgorzata Maria Dominiak (DuPont-Danisco)
- 17:30 Poster session
- 20:30 **Dinner**

Time Wednesday 12 June 2013

Session 2 (continued): Chemistry reduction. Chair: Professor Jørn Dalgaard Mikkelsen

- 09:00 Keynote lecture: *Life cycle assessment of hydrocolloids*
by Mikkel Thrane (DuPont)
- 09:45 LeanGreenFood lecture: *Structural modification of enzymes for immobilization on solid supports*
by Roberto Tumolo (Consejo Superior de Investigaciones Científicas - CSIC)
- 10:05 LeanGreenFood lecture: *Development of new oligosaccharide synthesis routes*
by Alexandra Zakharova (Technical University of Denmark)
- 10:25 LeanGreenFood lecture: *Evaluation of pressure tuning of enzymes*
by Mahsa Naghshineh (Agricultural University of Athens & University of Copenhagen)
- 10:45 *Session summary* by Jørn Dalgaard Mikkelsen (Technical University of Denmark):
- 10:55 **Break**

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Time **Wednesday 12 June 2013**

Session 3: Consumer acceptance. Chair: Professor Klaus Grunnert

- 11:25 Keynote lecture: *Consumer Acceptance of Innovations*
by Ben Lowe (Kent Business School, University of Kent)
- 12:10 LeanGreenFood lecture:
Attitude formation towards new food technologies through evaluative conditioning
by Natascha Loebnitz (Aarhus University, Wageningen University)
- 12:30 Round table discussion
- 13:10 **Portable lunch**
- 13:30 Social activity: Visit to Ouranoupolis and guided cruise to Mt. Athos

Time **Thursday 13 June 2013**

Session 4: Water and energy reduction. Chair: Professor Anja Janssen

- 09:00 Keynote lecture: *Biodiversity in the enzyme world: alternatives for natural food processing*
by Marco van den Berg (DSM Food Specialities)
- 09:45 Guest lecture: *Real time, molecular level observation of the action of single cellulases and combination of cellulases on cellulose fibers*
by John Dutcher (University of Guelph)
- 10:30 LeanGreenFood lecture: *Wheat gluten hydrolysis at low water contents*
by Nicolas Hardt (Wageningen University)
- 10:50 LeanGreenFood lecture:
Influence of initial protein concentration on the mechanism of enzymatic hydrolysis
by Claire Butré (Wageningen University)
- 11:10 **Break**
- 11:40 LeanGreenFood lecture:
Synergistic action of enzyme preparations towards recalcitrant corn silage polysaccharides
by Klaus Neumuller (DSM Food Specialities)
- 12:00 LeanGreenFood lecture: *Kinetic modelling of enzymatic hydrolysis of carbohydrates*
by Karolina Bednarska (Wageningen University)
- 12:20 *Session summary* by Anja Janssen (Wageningen University)
- 12:30 *Closing remarks*, Karsten Olsen (University of Copenhagen)
- 12:40 **Lunch**

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Time **Thursday 13 June 2013**

LeanGreenFood meeting

14:00 LeanGreenFood consortium meeting (Steering Committee, Supervisory Board and Advisory Board)