

Course: Food and Biorefinery Enzymology (FBE)



Programme of the 6th edition, 2017

Week 39: 25-29 September

Graduate School VLAG, Wageningen University and Research, The Netherlands in co-operation with ESSIB 4th edition

Course Directors: Dr. Mirjam Kabel, Prof. Willem van Berkel

Scientific Committee: Prof. John van der Oost, Prof. Harry Gruppen, Prof. Jürgen Pleiss, Prof. Marina Lotti, Dr. Pau Ferrer

Monday, 25 September 2017

ENZYMES AND INDUSTRIAL FOOD APPLICATIONS

09:30	Registration	
10:00-10:15	Welcome, short introduction to the programme	Prof. Willem van Berkel / Dr. Mirjam Kabel (WUR)
10:15-11:00	An overview of the industrial applications of the six classes of enzymes	Dr. Margot Schooneveld (DSM)
11:00-11:15	<i>Break</i>	
11:15-12:15	Protein hydrolysis & analysis	Prof. Harry Gruppen (WUR)
12:15-12:30	<i>Group Photo</i>	
12:30-13:30	<i>Lunch</i>	
13:30-14:15	Proteases - classification, mode of action and industrial use	Dr. Margot Schooneveld (DSM)
14:15-15:00	Lipid hydrolysis	Prof. Maarten Egmond (UU)
15:00-15:30	<i>Break</i>	
15:30-16:15	Food and non-food applications of lipases	Prof. Marina Lotti (Univ. of Milano-Bicocca)
16:15-17:15	Oxido-reductases in the food industry	Dr. Harry van der Hijden (Unilever Research)
17:45-19:15	<i>Dinner at Hof van Wageningen</i>	
19:15-20:30	Poster presentations and drinks	

Tuesday, 26 September 2017

PRACTICALS

Food Chemistry: Study Case Proteases

Biochemistry: Watching Enzyme Stability

Wednesday, 27 September 2017

BIOREFINERY ENZYMES

08:30-09:15	LPMOs for biomass degradation	Dr. Roland Ludwig (BOKU, Vienna)
09:15-10:15	Hemicellulases for plant biomass conversion	Dr. Mirjam Kabel (WUR)
10:15-10:45	<i>Break</i>	
10:45-11:45	Diversity of plant biomass degrading enzymes in fungi	Prof. Ronald de Vries (UU /CBS-KNAW)
11:45-12:30	Enzymes in biorefinery applications	Dr. Sandra Hinz (DuPont)
12:30-13:30	<i>Lunch</i>	
13:30-14:30	Fungal oxidoreductases for food production and analysis	Dr. Roland Ludwig (BOKU, Vienna)
14:30-15:30	Control of enzymatic browning by polyphenol oxidases	Dr. Jean-Paul Vincken (WUR)
15:30-16:00	<i>Break</i>	
16:00-17:00	Aryl-alcohol oxidases: enzymes with taste	Prof. Willem van Berkel (WUR)

Thursday, 28 September 2017

CARBOHYDRATE DEGRADING ENZYMES, CLASSIFICATION AND PRODUCTS

08:30-09:15	Glycoside hydrolases: sequences, families, structures and catalytic mechanisms	Dr. Marco Moracci (CNR, Napels)
09:15-09:30	<i>Break</i>	

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10:15-10:30	<i>Break</i>	
10:30-11:30	Analytical approaches for enzyme products	Prof. Henk Schols (WUR)
EXCURSION TO DSM		
11:45	Departure to Delft	
14:00-17:30	Excursion DSM	
18:00-20:30	Course dinner in Delft	
20:30	Departure to Wageningen	

Friday, 29 September 2017

Enzymes and Biotechnology

09:00-09:45	Can CRISPR/Cas be applied for food and biorefinery applications?	Prof. John van der Oost (WUR)
09:45-10:30	Laccases and DyP-type peroxidases: enzymological properties and added-value products formation	Dr. Lúgia Martins (Univ. of Lisbon)
10:30-11:00	<i>Break</i>	
11:00-11:45	Engineering the ligninolytic enzyme consortium using directed evolution	Dr. Lúgia Martins (Univ. of Lisbon)
11:45-12:30	Enzymes in malting and brewing	Dr. August Bekkers (Heineken)
12:30-12:45	Closing remarks and certificates	Dr. Mirjam Kabel & Prof. Willem van Berkel (WUR)
12:45-13:30	<i>Farewell Lunch</i>	