



International Conference

CHEMICAL REACTIONS IN FOODS VII

November 14–16, 2012 ■ Prague, Czech Republic



7th International Conference on Chemical Reactions in Foods

November 14–16, 2012

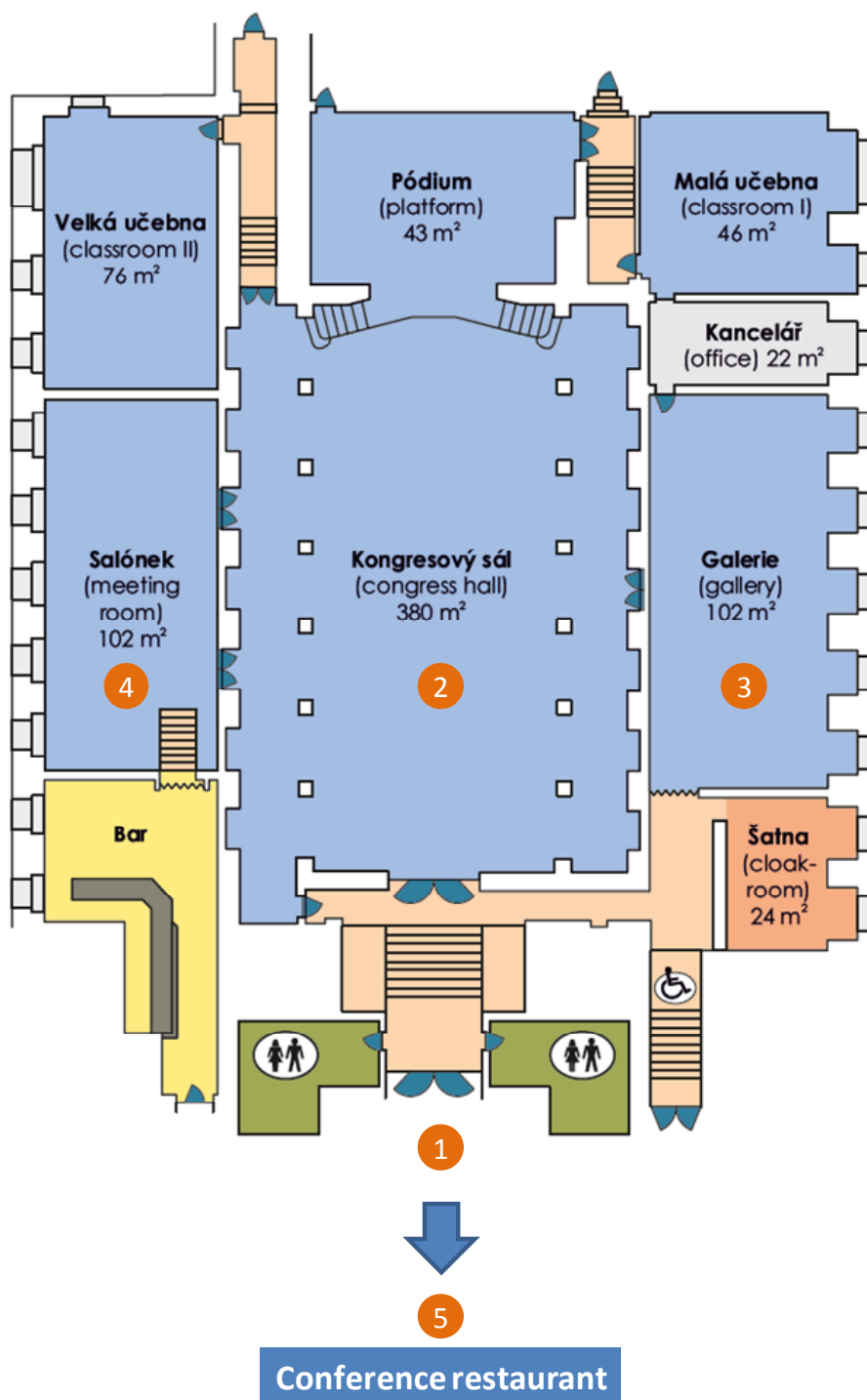
Masaryk College Conference Centre • PRAGUE • CZECH REPUBLIC

CONFERENCE PROGRAM

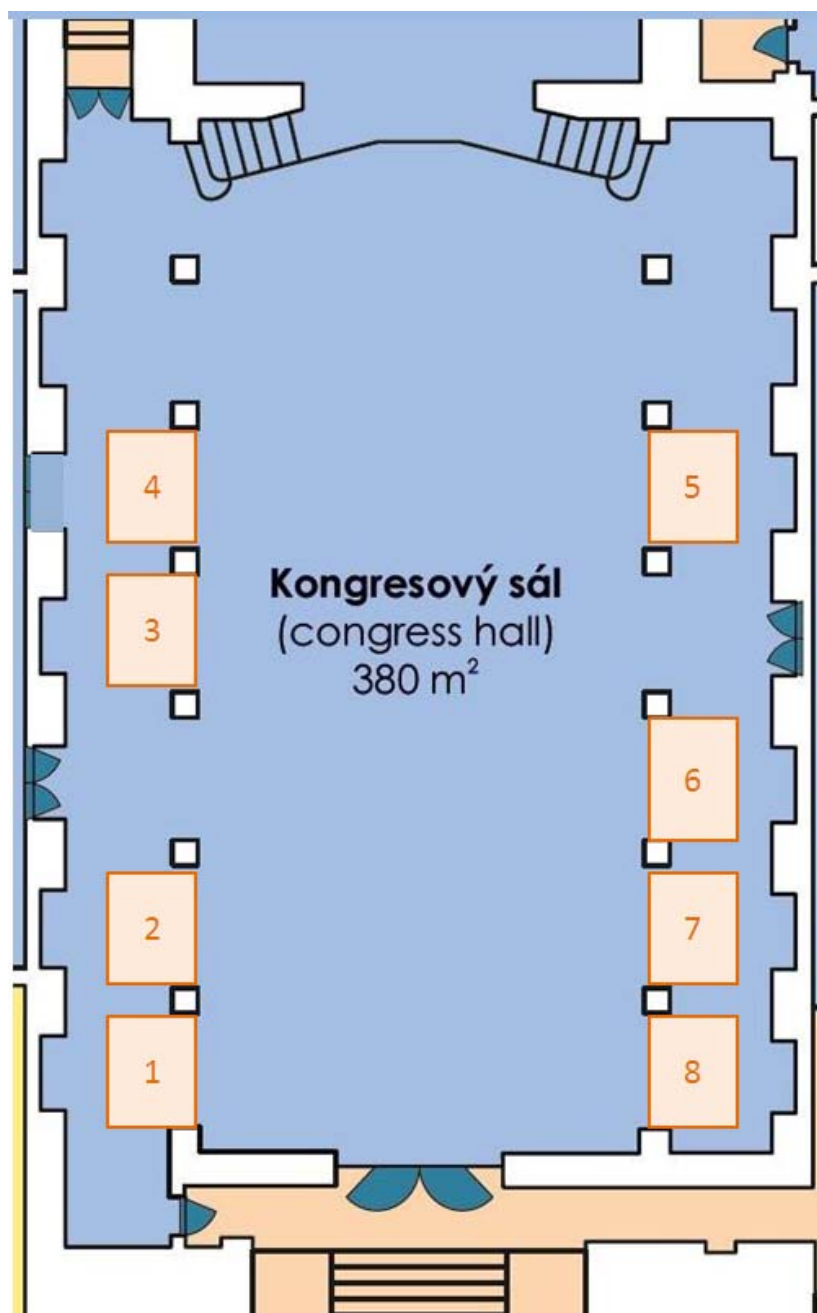
(DRAFT version from 26. 09. 2012)

CRF 2012 Venue

Masaryk College Conference Centre



- 1: Entrance to the conference centre & Registration desk
- 2: Conference hall
Exhibition area
- 3: Poster area
- 4: Poster area
- 5: Conference restaurant
Catering area (coffee breaks, lunch, Welcome Cocktail)

EXHIBITION – FLOOR PLAN

Booth no.	Company	Booth no.	Company
1	Not occupied yet	5	Not occupied yet
2	Not occupied yet	6	Not occupied yet
3	Biotage	7	Not occupied yet
4	Chiron	8	Not occupied yet

CRF 2012 – PROGRAM AT A GLANCE

Time / Date	WEDNESDAY November 14, 2012	THURSDAY November 15, 2012	FRIDAY November 16, 2012
9:00–10:00		Oral session 3 STRATEGIES TO IMPROVE FOOD QUALITY AND SAFETY II	Oral session 6 COMPOUNDS ASSOCIATED WITH NUTRITIONAL AND SENSORY QUALITY OF FOODS II
10:00–10:30			
10:30–11:00	Registration for the conference Masaryk College Conference Centre	Coffee break / Exhibition	Brunch / Exhibition
11:00–12:30		Oral session 4 BIOLOGICALLY-ACTIVE CONSTITUENTS OF FOODS AND FOOD RAW MATERIALS II	Oral session 7 COMPOUNDS ASSOCIATED WITH NUTRITIONAL AND SENSORY QUALITY OF FOODS III
12:30–13:00		Lunch	Final discussion panel & CRF 2012 poster award & Closing address
13:00–13:30	Opening of the conference & Welcome to the CRF 2012		
13:30–15:30	Oral session 1 STRATEGIES TO IMPROVE FOOD QUALITY AND SAFETY I	Poster session / Exhibition	
15:30–16:00	Coffee break / Exhibition	Coffee break / Exhibition	
16:00–18:30	Oral session 2 BIOLOGICALLY-ACTIVE CONSTITUENTS OF FOODS AND FOOD RAW MATERIALS I	Oral session 5 COMPOUNDS ASSOCIATED WITH NUTRITIONAL AND SENSORY QUALITY OF FOODS I	
18:30–19:30	Welcome Cocktail Masaryk College Conference Centre		
20:00–22:30		Conference Dinner Café & Restaurant Slavia	

Coffee breaks, lunch, Welcome drink will be served in the conference centre restaurant.

WEDNESDAY, November 14, 2012

10:30–13:00 **Registration for CRF 2012 conference**

13:00–13:20
Conference hall

OPENING of the conference and WELCOME

MUSIC WELCOME (harp & flute)

13:20–15:30
Conference hall

**ORAL SESSION 1:
Strategies to Improve Food Quality and Safety I**

13:20–13:50 **L1**

RESEARCH AND INNOVATION IN FOOD INDUSTRY

Beate Kettlitz, FoodDrinkEurope, Brussels, Belgium

13:50–14:20 **L2**

**INDUSTRIAL PRODUCTION OF FRUIT JUICES:
CURRENT CHALLENGES FOR FOOD RESEARCH**

Barbara Siegmund, Graz University of Technology, Institute of Analytical Chemistry and Technology, Graz, Austria

14:20–14:40 **L3**

**DEEP ULTRAVIOLET LIGHT-EMITTING DIODES TO ENHANCE
PLANT NUTRITIONAL VALUE AND MAINTAIN FRESHNESS AND
PHYTOCHEMICAL COMPOSITION DURING POSTHARVEST
STORAGE**

Steven Britz, USDA Food Components and Health Lab, Beltsville, USA

14:40–15:00 **L4**

**EFFECT OF A PREVIOUS HIGH HYDROSTATIC PRESSURE
TREATMENT ON LIPID DAMAGE OF CHILLED JACK MACKEREL
(TRACHURUS MURPHY)**

Santiago Aubourg, Instituto de Investigaciones Marinas, CSIC, Vigo, Spain

15:00–15:10 **L5***

**CHANGES IN TANNIN SOLUBILITY AND MICROSTRUCTURE OF
HIGH HYDROSTATIC PRESSURE TREATED PERSIMMON DURING
STORAGE AT 4 °C**

José Luis Vázquez-Gutiérrez, Universitat Politecnica de Valencia, Spain

15:10–15:30 **L6**

**FORMATION OF SAFE CONTACT ACTIVE ANTIMICROBIAL
SURFACES FOR FOOD PACKAGING**

Elena Poverenov, Agricultural Research Organization, The Volcani Center, Department of Food Quality and Safety, Bet Dagan, Israel

15:30–16:00
Conference restaurant /
Conference hall

Coffee Break / EXHIBITION

16:00–18:20
Conference hall

**ORAL SESSION 2:
Biologically-Active Constituents of Foods and Food Raw
Materials I**

16:00–16:30 **L7**

WINE-FROM GRAPES TO A MATURED PRODUCT

Erich Leitner, Graz University of Technology, Institute of Analytical Chemistry and Technology, Graz, Austria

16:30–16:50 **L8**

**CONVERSION OF HISTAMINE IN HISTAMINOL: A NEW
PERSPECTIVE FOR WINE QUALITY AND SAFETY?**

Marco Arlorio, Dipartimento di Scienze del Farmaco and DFB (Drug and Food Biotechnology) Center, Universite degli Studi del Piemonte Orientale "A. Avogadro", Novara, Italy

- 16:50–17:10 **L9** **THE CASE STUDY OF ACRYLAMIDE FORMATION IN THERMALLY TREATED VEGETABLE IN RELATION TO TOTAL POLYPHENOLS CONTENT AND ANTIOXIDANT CAPACITY**
Kristina Kukurova, Food Research Institute, Bratislava, Slovak Republic
- 17:10–17:30 **L10** **ANTIOXIDATIVE CAPACITY OF BETA VULGARIS EXTRACTS AND THEIR EFFECT ON THE FORMATION OF HETEROCYCLIC AMINES IN A MODEL SYSTEM**
Audrius Pukalskas, Kaunas University of Technology, Kaunas, Lithuania
- 17:30–17:50 **L11** **MATURATION REACTIONS IN NZ MANUKA HONEY AND THEIR IMPACT ON BIOACTIVITY**
Ralf Schlothauer, Comvita NZ Ltd., Te Puke, New Zealand
- 17:50–18:00 **L12*** **TRYPTOPHAN-CONTAINING DIPEPTIDES: BIOACTIVE COMPOUNDS IN FOODS WITH A BLOOD PRESSURE LOWERING EFFECT?**
Diana Lunow, Institute for Food Chemistry, Technical University of Dresden, Germany
- 18:00–18:10 **L13*** **COFFEE PHENOLICS DEGRADATION AND FORMATION OF BIOACTIVE METABOLITES BY HUMAN COLONIC MICROFLORA**
Iziar-Amaia Ludwig, University of Navarra, Pamplona, Spain
- 18:10–18:20 **L14*** **OPTIMIZATION OF THE FORMATION OF VINYL DITHIOLS, A THERAPEUTICAL COMPOUND FROM GARLIC**
B erenice Dethier, University of Liege (Gembloux Agro-Bio Tech), Gembloux, Belgium

18:30–19:30Conference restaurant /
Conference hall**Conference Welcome Drink
(Masaryk College Conference Centre)**

* Young scientist presentation

THURSDAY, November 15, 2012

9:00–10:30
Conference hall

ORAL SESSION 3: Strategies to Improve Food Quality and Safety II

- 9:00–9:30 **L15** **NOVEL TECHNOLOGIES TO REDUCE PROCESSING CONTAMINANTS AND SOME OTHER UNDESIRABLE FOOD COMPONENTS**
Jana Hajslova, Institute of Chemical Technology, Prague, Czech Republic
- 9:30–9:50 **L16** **ACRYLAMIDE FORMATION IN FOODS: ROLE OF COMPOSITION AND PROCESSING**
Vural Gökmen, Hacettepe University, Ankara, Turkey
- 9:50–10:10 **L17** **FURAN IN HEAT-PROCESSED FOODS: FIVE-YEARS FILED MONITORING, REDUCTION AND RISK ASSESSMENT STUDY IN KOREA**
Kwang-Geun Lee, Dongguk University, Seoul, Korea
- 10:10–10:30 **L18** **FORMATION OF AROMA-ACTIVE COMPOUNDS AS WELL AS TOXICOLOGICALLY RELEVANT STYRENE DURING THE PRODUCTION OF WHEAT BEER**
Michael Granvogl, German Research Centre of Food Chemistry, Freising, Germany

10:30–11:00
Conference restaurant /
Conference hall

Coffee Break / EXHIBITION

11:00–12:30
Conference hall

ORAL SESSION 4: Biologically-Active Constituents of Foods and Food Raw Materials II

- 11:00–11:30 **L19** **INGREDIENTS FROM LOW VALUE BY-PRODUCTS OF SELECTED FOOD MANUFACTURING INDUSTRIES**
Jennifer Ames, University of the West of England, Bristol, UK
- 11:30–11:50 **L20** **CHEMICAL AND FUNCTIONAL CHARACTERISTICS OF FIBER ISOLATED FROM HAZELNUT SKINS: NEW PREBIOTIC INGREDIENT FROM BY-PRODUCTS?**
Rosa Montella, Dipartimento di Scienze del Farmaco and DFB (Drug and Food Biotechnology) Center, Universite degli Studi del Piemonte Orientale "A. Avogadro", Novara, Italy
- 11:50–12:00 **L21*** **IMPACT OF TEMPERATURE AND WATER ACTIVITY ON ENZYMATIC AND NON-ENZYMATIC REACTIONS DEVELOPMENT IN RECONSTITUTED DRIED MANGO**
Emilie Korbel, CIRAD, UMR QualiSud, Montpellier, France
- 12:00–12:20 **L22** **INFLUENCE OF BAKING IN DIGESTIBILITY AND BIOACCESSIBILITY OF CARBOHYDRATES, POLYPHENOLS AND FORMATION OF MAILLARD COMPOUNDS**
M. Elena Diaz-Rubio, Institute of Food Science, Technology and Nutrition (ICTAN-CSIC), Madrid, Spain
- 12:20–12:30 **L23*** **THE POTENTIAL OF AMBIENT MASS SPECTROMETRY FOR RAPID MONITORING OF MEAT AND FISH FRESHNESS**
Hana Daňhelová, Institute of Chemical Technology, Prague, Czech Republic

12:30–13:30
Conference restaurant

Lunch

* Young scientist presentation

THURSDAY, November 15, 2012

13:30–15:30

Gallery &
Meeting room

POSTER SESSION / EXHIBITION

15:30–16:00

Conference restaurant /
Gallery & Meeting rooms /
Conference hall

Coffee Break / POSTER SESSION / EXHIBITION

16:00–18:10

Conference hall

ORAL SESSION 5:

Compounds Associated with Nutritional and Sensory Quality of Foods I

16:00–16:30 L24

AMINO ACID DEGRADATIONS PRODUCED BY LIPID OXIDATION PRODUCTS

Francisco J. Hidalgo, Instituto de la Grasa, CSIC, Seville, Spain

16:30–16:50 L25

IMPACT OF INTRINSIC AND EXTRINSIC PARAMETERS ON THE FORMATION OF TOXIC ALDEHYDES IN FOODS

Antonios Papastergiadis, Ghent University, Belgium

16:50–17:00 L26*

STUDIES ON THE FORMATION PATHWAY OF ACROLEIN

Alice Ewert, German Research Center for Food Chemistry

17:00–17:20 L27

ISOTHERMAL KINETICS OF MALONDIALDEHYDE CONTENT CHANGES IN CHICKEN MEATS

Stéphanie Roux, CIRAD, Saint-Denis, La Réunion, France

17:20–17:40 L28

OXIDATION OF TRIACYLGLYCEROLS IN PRESENCE OF CAROTENOIDS - IDENTIFICATION OF OXIDIZED SPECIES BY LC-MS

Michael Murkovic, Graz University of Technology, Graz, Austria

17:40–17:50 L29*

QUANTITATIVE AND QUALITATIVE ANALYSIS OF HIGH MOLECULAR COMPOUNDS IN VEGETABLE OILS FORMED UNDER HIGH TEMPERATURES IN THE ABSENCE OF OXYGEN

Klara Cihelkova, Institute of Chemical Technology, Prague, Czech Republic

17:50–18:10 L30

3-MCPD AND GLYCIDYL FATTY ACID ESTERS IN EDIBLE PLANT OILS: AN OVERVIEW ON RECENT RESEARCH AND COMING PROJECTS

Tim Rudolph, Pilot Pflanzenöltechnologie Magdeburg, Germany

From 20:00

Conference Dinner

(Café & Restaurant Slavia, historical centre of Prague)

Registration for dinner at the registration desk, until Wednesday, November 14, 13:00

* Young scientist presentation

FRIDAY, November 16, 2012

9:00–10:40
Conference hall

ORAL SESSION 6: Compounds Associated with Nutritional and Sensory Quality of Foods II

9:00–9:30 **L31** **DISCOVERY, SENSORY ACTIVITY AND TASTE RECEPTOR ACTIVATION OF THERMALLY GENERATED TASTE MODULATORS IN FOODS**
Thomas Hofmann & Barbara Suess, Technische Universität München, Germany

9:30–10:00 **L32** **NOVEL APPROACHES IN INDUSTRIAL RESEARCH TARGETING QUALITY ATTRIBUTES OF EXTRUDED FOOD PRODUCTS**
Tomas Davidek, Nestle PTC Orbe, Switzerland

10:00–10:30 **L33** **DECODING THE ATTRACTIVE AROMAS OF COCOA AND CHOCOLATE: AN EXCURSION INTO THE MOLECULAR WORLD OF FLAVOUR FORMATION INDUCED BY FOOD PROCESSING**
Peter Schieberle, Technische Universität München, Germany

10:30–10:40 **L34*** **IMPROVEMENT OF THE AROMA OF THE GLUTEN-FREE BREAD BY AROMA-ACTIVE MALT PREPARATIONS**
Gabriela Ratz, German Research Center for Food Chemistry, Freising, Germany

10:40–11:10
Conference restaurant /
Conference hall

Brunch / EXHIBITION

11:10–12:30
Conference hall

ORAL SESSION 7: Compounds Associated with Nutritional and Sensory Quality of Foods III

11:10–11:40 **L35** **GLYCATION COMPOUNDS IN FOODS: FORMATION, METABOLIC TRANSIT, FUNCTIONAL CONSEQUENCES**
Thomas Henle, Technische Universität Dresden, Germany

11:40–12:00 **L36** **GASTROINTESTINAL DIGESTION AND EPITHELIAL TRANSPORT OF PYRRALINE**
Michael Hellwig, Technische Universität Dresden, Dresden, Germany

12:00–12:10 **L37*** **AN ACTIVE ROLE OF SELECTED DIETARY POLYPHENOLS IN CAMELIZATION AND PROTEIN GLYCATION MODEL SYSTEMS**
Xinchen Zhang, The University of Hong Kong, Hong Kong

12:10–12:30 **L38** **MELANOIDINS EXHIBIT PRO-OXIDATIVE EFFECTS ON ISOLATED AND CELLULAR DNA AFTER COMPLEXATION OF METAL IONS**
Bettina Cämmerer, University of Technology, Institute of Food Technology and Food Chemistry, Berlin, Germany

12:30–13:00 **FINAL DISCUSSION PANEL**

13:00–13:30 **CLOSING ADDRESS**
CRF 2012 poster award
Announcement of CRF 2013

* Young scientist presentation

POSTER SESSION

THURSDAY, November 15, 2012

13:30–15:30

POSTER SESSION

**COMPOUNDS ASSOCIATED WITH NUTRITIONAL AND SENSORY
QUALITY OF FOODS**

**BIOLOGICALLY-ACTIVE CONSTITUENTS OF FOODS AND FOOD
RAW MATERIALS**

STRATEGIES TO IMPROVE FOOD QUALITY AND SAFETY

CHEMISTRY BEHIND NOVEL FOODS