

PROGRAM

(Version August 1, 2023)

9th International Conference on
**CHEMICAL REACTIONS
IN FOODS IX
(CRF 2023)**

**Chemistry & nutrition science beyond smart
food designing**

September 13-15, 2023

Masaryk College Congress Centre • PRAGUE • CZECH REPUBLIC

Organised by:

University of Chemistry and Technology, Prague, Czech Republic (UCT Prague)

University of Piemonte Orientale, Italy (UPO)

Wageningen University & Research, The Netherlands (WUR)

CRF 2023 - PROGRAM AT A GLANCE

Time / Date	WEDNESDAY September 13, 2023		THURSDAY September 14, 2023	FRIDAY September 15, 2023
8:00–9:00			Registration for the conference	Registration for the conference
9:00–10:00	Registration for the conference	Interactive course FOOD CHEMISTRY: LET'S ADDRESS JOINTLY CHALLENGES FOR FUTURE	Oral Session 3 FOODS PRODUCTION AND THEIR CHARACTERISATION	Oral Session 6 CHEMICAL REACTIONS IN PROCESSED / STORED FOODS II
10:00–10:30				
10:30–11:00			Coffee break	Coffee break
11:00–12:00			Oral Session 4 STRATEGIES TO IMPROVE FOOD QUALITY AND CHEMICAL SAFETY II	Oral Session 7 CHEMICAL REACTIONS IN PROCESSED / STORED FOODS III
12:00–12:30				
12:30–13:00			Lunch	Closing address & CRF 2023 poster award
13:00–13:30	Opening of the conference CRF 2023			
13:30–15:00	Oral Session 1 CHEMICAL REACTIONS IN PROCESSED / STORED FOODS I		Poster Session	
15:00–15:30			Coffee break	
15:30–16:00	Coffee break		Oral Session 5 MITIGATION OF FOOD CONTAMINANTS AND RESIDUES	
16:00–18:00	Oral Session 2 STRATEGIES TO IMPROVE FOOD QUALITY AND CHEMICAL SAFETY I			
18:30–19:30	Conference Welcome Drink			
From 20:00			Conference Dinner	

Coffee breaks and Welcome drink will be served in the conference area; lunch will be served in the conference restaurant.

WEDNESDAY, September 13, 2023

9:00-18:00 Registration for the CRF 2023 conference

10:00-12:00
Conference hall

INTERACTIVE COURSE
FOOD CHEMISTRY: LET'S ADDRESS JOINTLY CHALLENGES FOR FUTURE

13:00-13:30
Conference hall

OPENING of the conference
Jana Hajslova & Marco Arlorio & Vincenzo Fogliano, Chairs of the CRF 2023 Conference
Representative of the University of Chemistry and Technology, Prague
Representative of the Ministry of Agriculture of the Czech Republic

13:30-15:30
Conference hall

ORAL SESSION 1:
CHEMICAL REACTIONS IN PROCESSED / STORED FOODS I

13:30-13:55 **L1** **ON THE POSITIVE NEXUS BETWEEN FOOD (ULTRA)PROCESSING AND FOOD QUALITY**
Vincenzo Fogliano, Wageningen University, Wageningen, Netherlands

13:55-14:20 **L2** **111 YEARS OF THE MAILLARD REACTION - ANYTHING LEFT TO EXPLORE?**
Thomas Henle, Technische Universität Dresden, Dresden, Germany

14:20-14:45 **L3** **RISK RANKING OF HARMFUL SUBSTANCES IN FOOD AND THE ROLE OF PROCESSING CONTAMINANTS**
Rudolf Krska, University of Natural Resources and Life Sciences, Vienna, Austria

14:45-15:10 **L4** **INTERACTION OF FOOD CONTACT MATERIAL WITH PACKED FOOD: HOW TO EVALUATE THE PRODUCT SAFETY**
Erich Leitner, Graz University of Technology, Graz, Austria

15:10-15:30 **L5** **PHENOLIC COMPOUNDS ORIGINATED FROM EDIBLE PLANTS STRONGLY INHIBITING PANCREATIC LIPASE**
Aristeidis Tsagkaris, University of Chemistry and Technology, Prague, Czech Republic

15:30-16:00
Conference area

Coffee Break

16:00-18:00 Conference hall	ORAL SESSION 2: STRATEGIES TO IMPROVE FOOD QUALITY AND CHEMICAL SAFETY I
16:00-16:25 L6	'SMART FOODS' DESIGNING: CHALLENGES FOR INTERDISCIPLINARY RESEARCH <i>Jana Hajslova, University of Chemistry and Technology, Prague, Czech Republic</i>
16:25-16:50 L7	PEPTIDE FORMATION IN FOOD: IMPLICATIONS FOR QUALITY, BIOACTIVITY AND AUTHENTICITY CONTROL <i>Monika Pischetsrieder, University of Erlangen-Nuremberg, Erlangen, Germany</i>
16:50-17:10 L8	ECO-SUSTAINABLE SOLUTIONS TO IMPROVE THE SHELF LIFE OF FRESH DAIRY PRODUCTS: THE CASE OF "ITALIAN MOZZARELLA CHEESE" <i>Laura Quintieri, National Research Council of Italy, Bari, Italy</i>
17:10-17:30 L9	EFFECT OF FLUIDIZED BED ROASTING ON COCOA CHARACTERISTICS <i>Burçe Ataç Mogol, Hacettepe University, Ankara, Turkey</i>
17:30-17:50 L10	EVALUATING THE IMPACT OF REFRIGERATION AND CELLULOSE MOLECULAR FILTRATION ON EXTRA VIRGIN OLIVE OIL COMPOSITION DURING STORAGE: A COMPREHENSIVE 2-YEAR STUDY <i>Marilena Dasenaki, National and Kapodistrian University of Athens, Athens, Greece</i>
	Discussion
18:30-19:30 Conference area	Conference Welcome Drink

THURSDAY, September 14, 2023

9:00-10:30
Conference hall

ORAL SESSION 3: FOODS PRODUCTION AND THEIR CHARACTERISATION

9:00-9:25 **L11** **ADEQUATE POSTHARVEST-TREATMENT OF CLIMACTERIC FRUITS IS ESSENTIAL FOR THE FLAVOUR FORMATION OF THE FRUITS**
Barbara Siegmund, Graz University of Technology, Graz, Austria

9:25-9:45 **L12** **HYPERSPECTRAL IMAGING AND MACHINE LEARNING FOR ASSESSING LETTUCE QUALITY**
Leevi Annala, University of Helsinki, Helsinki, Finland

9:45-10:05 **L13** **INFLUENCE OF CHIA SEEDS ON THE FORMATION OF ACRYLAMIDE IN BISCUITS**
Carmen Breitling-Utzmann, Official Food and Veterinary Control Laboratory CVUA Stuttgart, Fellbach, Germany

10:05-10:25 **L14** **TISSUE DISRUPTION AND ACID ADDITION AFFECT THE ENZYMATIC GLUOSINOLATE HYDROLYSIS IN RED CABBAGE**
Franziska Hanschen, Leibniz Institute of Vegetable and Ornamental Crops, Großbeeren, Germany

Discussion

10:30-11:00
Conference area

Coffee Break

11:00-12:30
Conference hall

ORAL SESSION 4: STRATEGIES TO IMPROVE FOOD QUALITY AND CHEMICAL SAFETY II

11:00-11:25 **L15** **ERYTHRITOL AND FOOD SAFETY: CHEMICAL REACTIVITY IN FOODS AND NUTRITIONAL INSIGHTS**
Marco Arlorio, Università del Piemonte Orientale Amedeo Avogadro, Novara, Italy

11:25-11:45 **L16** **UNVEILING THE IMPACT OF FOOD ADDITIVES ON FLAVOR OF HEALTHY FOODS: THE ROLE IN THE POLYPHENOL-ORAL CONSTITUENTS INTERACTIONS**
Mónica Jesus, REQUIMTE, LAQV, Porto, Portugal

11:45-12:05 **L17** **SAVOURY BISCUITS PREPARED WITH ADDITION OF CRICKET FLOUR: A COMPREHENSIVE QUALITY ASSESSMENT**
Beverly Hradecka, University of Chemistry and Technology, Prague, Czech Republic

12:05-12:25 **L18** **CHOLESTEROL OXIDATION PRODUCTS AS MARKERS OF NUTRITIONAL QUALITY OF MILK AND MILK PRODUCTS**
Federico Canzoner, Soremartec Italia srl, Alba, Italy

Discussion

12:30-13:30
Conference restaurant

Lunch

THURSDAY, September 14, 2023

13:30-15:00
Conference hall

POSTER SESSION

Authors' presentation slot.
Posters are displayed during the whole conference.

15:00-15:30
Conference area

Coffee Break

15:30-18:00
Conference hall

ORAL SESSION 5:

MITIGATION OF FOOD CONTAMINANTS AND RESIDUES

15:30-15:55 L19

MANIPULATING THE MAILLARD REACTION TO REDUCE ACRYLAMIDE AND MAINTAIN FLAVOUR

Jane K. Parker, University of Reading, Reading, United Kingdom

15:55-16:20 L20

ACRYLAMIDE REDUCTION STRATEGY IN COMBINATION WITH DEOXYNIVALENOL MITIGATION IN INDUSTRIAL BISCUITS PRODUCTION

Michele Suman, Catholic University Sacred Heart, Parma; Piacenza, Italy

16:20-16:45 L21

THE ROLE OF 5-HYDROXYMETHYLFURFURAL ACCUMULATION VIA SUCROSE DEGRADATION ON ACRYLAMIDE FORMATION IN LOW MOISTURE FOOD SYSTEMS

Vural Gökmen, Hacettepe University, Ankara, Turkey

16:45-17:05 L22

FURAN AND ALKYL FURANS IN BREAKFAST CEREALS - INFLUENCE OF INGREDIENTS AND PRODUCTION STEPS

Sarah Lipinski, University of Münster, Münster, Germany

17:05-17:30 L23

IS FERMENTATION A GOOD OPTION FOR MITIGATING ACRYLAMIDE IN LEGUMES?

Zuzana Ciesarova, Food Research Institute, Bratislava, Slovakia

17:30-17:55 L24

HIGH PRESSURE THERMAL STERILIZATION (HPTS) AND ITS EFFECT ON FOOD PROCESSING CONTAMINANTS AND QUALITY-RELATED PROPERTIES IN FOOD IN COMPARISON TO THERMAL-ONLY PROCESSING

Robert Sevenich, Technische Universität Berlin, Berlin, Germany

Discussion

From 20:00

Conference Dinner

FRIDAY, September 15, 2023

9:00-10:30
Conference hall

ORAL SESSION 6:
CHEMICAL REACTIONS IN PROCESSED / STORED FOODS II

9:00-9:25 **L25** **UNTARGETED 13C-LABELLING LC-HRMS BASED APPROACH TO STUDY THE FADE OF MYCOTOXINS DURING FOOD PROCESSING**
Alexandra Malachova, FFoQSI - Austrian Competence Centre for Feed and Food Quality, Safety & Innovation, Tulln, Austria

9:25-9:45 **L26** **FORMATION AND DEGRADATION OF GLYCATION COMPOUNDS DURING BEER PRODUCTION**
Melanie Kwasnicki, Technische Universität Dresden, Dresden, Germany

9:45-10:05 **L27** **ROASTING IMPACT ON COCOA AND COCOA BEAN SHELLS: AN OVERVIEW ON BIOACTIVE COMPOUNDS AND NEW UP-CYCLED INGREDIENTS**
Vincenzo Disca, Università del Piemonte Orientale Amedeo Avogadro, Novara, Italy

10:05-10:25 **L28** **PEPTIDE PROFILING OF PASTEURIZED MILK FERMENTED WITH YOGURT STARTER CULTURES *S. THERMOPHILUS* AND *LB. BULGARICUS* BY MICROLC-IM-QTOF-MS/MS**
Eva Beck, Friedrich-Alexander-Universität Erlangen-Nürnberg, Erlangen, Germany

Discussion

10:30-11:00
Conference area

Coffee Break

11:00-13:00
Conference hall

ORAL SESSION 7:
CHEMICAL REACTIONS IN PROCESSED / STORED FOODS III

11:00-11:20 **L29** **REACTIVE α -DICARBONYL COMPOUNDS IN MAILLARD CHEMISTRY OF MONO- AND OLIGOSACCHARIDES**
Karel Cejpek, University of Chemistry and Technology, Prague, Czech Republic

11:20-11:40 **L30** **FORMATION OF PROTEIN-BOUND MAILLARD REACTION PRODUCTS DURING THE STORAGE OF MANUKA HONEY**
Marcus Thierig, Technische Universität Dresden, Dresden, Germany

11:40-12:00 **L31** **CORRELATION OF MAILLARD REACTIONS COMPOUNDS WITH INDUSTRIAL "DOCE DE LEITE" COMPOSITION AND PHYSICO-CHEMICAL PARAMETERS**
Rodrigo Stephani, Federal University of Juiz de Fora, Juiz de Fora, Brazil

12:00-12:20 **L32** **MULTIRESPONSE KINETIC MODELLING OF MAILLARD REACTION DURING UHT-TREATMENT OF MILKS**
Aytul Hamzalioglu, Hacettepe University, Ankara, Turkey

12:20-12:40 **L33** **INFLUENCE OF PRESSURE ON MAILLARD-TYPE REACTIONS**
Uwe Schwarzenbolz, Technische Universität Dresden, Dresden, Germany

12:40-13:00
Conference hall

CLOSING ADDRESS
CRF 2023 poster award & Announcement of the next CRF event

POSTER SESSION

WEDNESDAY - FRIDAY, September 13-15, 2023

13:30–15:00

POSTER SESSION

(Thursday, September 14, 2023 - authors' presentation slot)

RAW MATERIALS FOR FOOD PRODUCTION

PROCESSING & STORAGE

STRATEGIES TO IMPROVE QUALITY, SAFETY AND SHELF LIFE INCREASE

FOOD ADDITIVES AND OTHER ADDED INGREDIENTS

MITIGATION OF FOOD CONTAMINANTS AND RESIDUES

NOVEL FOODS, BOTANICALS AND FOOD SUPPLEMENTS

FUTURE & UP-CYCLED FOOD

Posters are displayed during the whole conference.