5th MoniQA International Conference

16-18 September 2015, Porto, Portugal

Food and Health - Risks and Benefits

Book of Abstracts

MoniQA Association

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16 – 18 September 2015

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"Food and Health - Risks and Benefits" on "Innovative Technologies for Food Quality and Safety Management"

EDITORS:
Isabel Mafra
Joana Costa
Telmo Fernandes
Joana S. Amaral
M. Beatriz P. P. Oliveira

EDITION:
MoniQA Association
MarxerGass 2
1020 Vienna, Austria
Website: www.moniqa.org

DATE:
September 2015

ISBN:
978-3-9504109-0-7

LEGAL DEPOSIT:
398243/15

COVER DESIGN:
Joana Macedo (Faculty of Pharmacy, University of Porto, Portugal)

PRINTING:
Sersilito, Maia, Portugal

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Programme

5TH MONIQA INTERNATIONAL CONFERENCE 2015
16-18 SEPTEMBER 2015, PORTO, PORTUGAL
FOOD AND HEALTH – RISKS AND BENEFITS
MoniQA

Wednesday, 16 September 2015

9:00-12:30	**Pre-Conference Workshops** (Registration required)
	1) R-Biopharm, Gold Sponsor Workshop: "**Mycotoxin Analysis in your hand**"
	2) MoniQA Workshop: "**Towards Improved Food Allergen Reference Materials**"
	3) DISH-RI and METROFOOD Workshop: **"Pan-EU Food & Health RI- from challenges towards a roadmap: an introduction of two new initiatives METROFOOD and DISH-RI"**
12:30-13:30	Lunch (provided for workshop participants only)
13:30	**Official Conference Opening**
13.30-14:00	**Opening Session** Chairs: ***Beatriz Oliveira***, REQUIMTE-LAQV, Portugal; ***Roland Poms***, Imprint Analytics, Austria Welcome addresses: MoniQA President, ***Richard Cantrill,*** AOCS, USA, ICETA President, ***Baltazar Castro***, University of Porto, Portugal
14:00-16:00	**Session 1:** **Keynote lectures**
14:00-14:30	Food, Safety and Health - Societal Changes and Trends, ***Pier Sandro Cocconcelli***, Università Cattolica del Sacro Cuore, Italy
14:30-15:00	Microbial risks - New tools for risk assessment along global food chains, ***Bernd Appel***, Federal Institute for Risk Assessment, Germany
15:00-15:30	Food safety regulations based on real science ***Cristina L.M. Silva***, CBQF, College of Biotechnology, Portuguese Catholic University, Portugal and GHI – Global Harmonisation Initiative
15:30-16:00	Food safety capacity building needs and opportunities to support convergence with international standards, ***Samuel Godefroy***, World Bank, Washington DC, USA, and University Laval, Quebec, QC, Canada

15:30-16:20	Coffee Break and Poster Viewing
16:20-18:00	**Session 6:** **Personalized nutrition, food & health infrastructure** *Chairs:* ***Paul Finglas,*** EuroFIR/IFR, UK, and ***Isabel Ferreira,*** Polytechnic Institute of Bragança, Portugal
16:20-16:40	Advancing food and health research in Europe - Building a research infrastructure on food related to nutrition and health ***Karin Zimmermann***, Wageningen University, The Netherlands
16:40-17:00	QuaLiFY - Using scientifically credible data to underpin connected health ***Sian Astley***, EuroFIR AISBL, Belgium
17:00-17:15	*EuroFIR data and tools to support dietary monitoring and food labelling* ***Paul Finglas,*** *EuroFIR AISBL, Belgium*
17:15-17:30	The development of a preventive care infrastructure based on ubiquitous sensing – the PRECIOUS project ***Carlos Ramos***, EuroFIR AISBL, Belgium
17:30-17:45	Development of a new nutraceutical formulation containing microencapsulated polyphenolic extracts from wild *Fragaria vesca* L. vegetative parts ***Maria Inês Dias***, Polytechnic Institute of Bragança, Portugal
17:45-18:00	Slowing down starch digestibility of rice products by modifying process conditions ***Juicheng Rachel Hsu***, China Grain Products R&D Institute, Taiwan, Republic of China
19:30-23:00	***Gala Dinner*** 19:30 Short sightseeing tour by bus along Porto 20:00 Technical tour and dinner at Taylor's Porto Wine Cellar (registration mandatory)

Friday, 18 September 2015

9:00-10:30	**Session 7:** **Risks and benefits of minor nutritional components** Chairs: ***Victoria Heinrich***, OFI, Austria, and ***Joana Amaral,*** REQUIMTE-LAQV, Portugal
9:00-9:20	Risks and benefits of minor components – biological and chemical safety of spices and herbs ***Anneluise Mader***, Federal Institute for Risk Assessment, Germany
9:20-9:35	The contribution of phenolic composition to the antioxidant potential of *Glycyrrhiza glabra* L. rhizomes and roots ***Natália Martins***, Polytechnic Institute of Bragança, Portugal
9:35-9:50	Potential of Basil (*Ocimum basilicum* L.) as bioactive ingredient and natural preserver ***Márcio Carocho***, Polytechnic Institute of Bragança, Portugal

9:50-10:05	Lipid distribution in the meat of jau (*Zungaro jahu*) and the influence of storage temperature on its fat stability ***Flávio Alves da Silva***, Universidade Federal de Goiás, Brazil
10:05-10:40	**Session 8:** **Awarding Ceremony and short presentations of Best Posters** Chairs: **Roland Poms**, Imprint Analytics, and ***Top Sponsors***
10:40-11:10	Coffee Break and Poster Viewing
11:10-12:30	**Session 9:** **Microbial risks and benefits – new tools for risk assessment along the global food chain** Chairs: ***Wolfgang Kneifel,*** BOKU, Austria, and ***Sigrid Haas-Lauterbach,*** R-Biopharm, Germany
11:10-11:30	Optical techniques for food safety purpose ***Cristina Malegori***, Università degli Studi di Milano, Italy
11:30-11:50	Foodborne viruses and their challenges on food safety in China ***Heng Chen***, Sichuan University & Chengdu Center for Disease Prevention and Control, China
11:50-12:10	Biofilms exposed to disinfectants lead to an increase of virulence of *Salmonella enterica* Enteritidis ***Diana Rodrigues***, CEB - Centre of Biological Engineering, University of Minho, Portugal
12:10-12:30	The fate of indigenous microbiota during ripening of traditionally produced wild boar meat sausages, ***Marija Zunabovic***, BOKU, Austria
12:30-13:30	**Closing Session:** Chairs: ***Beatriz Oliveira,*** REQUIMTE-LAQV, Portugal, and ***Roland Poms,*** Imprint Analytics, Austria
12:50-13:20	Future challenges to the food safety system ***Franz Ulberth,*** Joint Research Center, European Commission, Belgium
13:20-13:30	Farewell and future MoniQA events ***Roland Poms***, Imprint Analytics, Austria
13:30-14:30	B2B Networking, Farewell with lunch.
14:30	End of Conference
14:30-15:30	**MoniQA General Assembly** (for MoniQA Association members only)

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Potential of Basil (*Ocimum basilicum* L.) as bioactive ingredient and natural preserver

M. Carocho[1,2], L. Barros[1], R.C. Calhelha[1,3], A. Ćiric[4], M. Soković[4], C. Santos-Buelga[5], P. Morales[2], I.C.F.R. Ferreira[1]

[1]Polytechnic Institute of Bragança, Portugal. [2]Department of Nutrition and Bromatology II, Faculty of Pharmacy, Complutense University of Madrid, Spain. [3]Center of Chemistry, University of Minho, Portugal. [4]University of Belgrade, Department of Plant Physiology, Institute for Biological Research "Siniša Stanković", Serbia and Montenegro. [5]Grupo de Investigación en Polifenoles (GIP), Faculty of Pharmacy, University of Salamanca

Email: mcarocho@ipb.pt

Basil (*Ocimum basilicum* L.) is a much appreciated plant, both for culinary purposes and for health treatments. It is used in many dishes and is also known for its properties as an appetite stimulant, carminative, and diuretic. It is also used as a mouth wash to cure inflammations. These bioactive properties could be correlated with its phenolic fraction. In this work the polyphenols present in both the infusion and decoction of basil, detected through HPLC-DAD-ESI/MS, are reported, along with the antitumor, antimicrobial and antioxidant activities. Among the polyphenols, rosmarinic acid was the main phenolic acid, and quercetin-3-O-rutinoside the main flavonoid. With regard to the antitumor properties, five cell lines were tested (MCF7, NCI-H460, HeLa, HepG2). The infusion showed a moderate activity against NCI-H460, HeLa and HepG2, while the decoction only showed activity against HeLa and HepG2. None of the extracts showed hepatotoxicity for non-tumour porcine liver cells (PLP2). In terms of antimicrobial activity, the results were very interesting. Regarding the bacterial strains, both the decoction and infusion revealed similar results, with *Staphylococcus aureus*, and *Micrococcus flavus* being the most sensitive species, with minimum inhibitory concentrations lower for the extracts than the positive controls. In terms of the antifungal activity both extracts were very effective against *Aspergillus ochraceus*, *Aspergillus niger*, *Trichoderma viridae* and *Penicillium ochrochloron* with minimum inhibitory concentrations lower than the positive controls for both extracts. Regarding the antioxidant activity, both the extracts yielded very similar results, and the effects were as follows: thiobarbituric acid reactive substances inhibition (TBARS) > reducing power > 2,2-diphenyl-1-picrylhydrazyl (DPPH) scavenging activity > β-carotene bleaching inhibition. These results place basil as a very interesting matrix to be added to foodstuffs due to its good taste, but also as a functional and/or preserver ingredient, given its high antioxidant and antimicrobial activities. Furthermore, our research group is testing this plant as a functional ingredient and natural preserver in "Serra da Estrela" cheese.

Acknowledgements: The authors are grateful to the company Cantinho das Aromáticas, Lda, for providing the basil samples. Further acknowledgements to the PRODER project No. 46577-PlantLact, the foundation for Science and Technology (FCT, Portugal) for financial support to

CIMO (Pest-OE/AGR/UI0690/2014) and L. Barros, and the Serbian Ministry of Education, Science and Technological Development for the Grant No. 173032.