ISOA 15th World Congress on Polyphenols Applications
September 28-30, 2022 - Valencia, Spain & Online

Conference & Workshop Agenda

www.polyphenols-site.com
Welcome to Polyphenols Applications 2022 Congress

On behalf of the International Society of Antioxidants in Nutrition and Health (ISANH), the International Society of Microbiota, and the Scientific Committee, we are delighted to announce that the 15th World Congress on Polyphenols Applications will be held on September 28-30, 2022 at ADEIT ‘Fundación Universitat’, Valencia, Spain, & Online.

This conference will bring together experts from academia and industry to discuss the latest scientific advances in fundamental and applied research on polyphenols. While the focus of the conference will be on food and nutrition research, pharmaceutical and medical sciences, as well as related disciplines such as microbiology and biotechnology, will also be covered.

Polyphenols Applications 2022 Sessions:

- Polyphenols & Microbiota – Recent Advances & Perspectives
- Polyphenols & Health: What We Know
- Technological Innovations in Polyphenols Extraction & Valorization
- Sensory Aspects of Polyphenols
- Polyphenols Applications 2022 – Innovations & Perspectives

Cannabis 2022: A new workshop on "Medical Cannabis, Cannabinoids and Derivatives: Recent Advances and Applications" will be held. Cannabis 2022 aims to cover the cannabis constituents, their isolation, and their application in the medical sector and food industry.

Among the hot topics that will be covered in this 3-day event: Microbiota, metabolites, adipose tissue, nervous system, senolytic activity, ageing, endothelial function, radioprotection, oxidative stress, ferroptosis, cancer, atherosclerosis, extracellular vesicles, cannabinoids, cannabinoid receptors, anticancer activity, antiviral activity, anti-dyslipidemic effect, ocular delivery, cosmetic application, polyphenols recovery, extraction, valorization, fermentation, wine polyphenols, sensory aspects, inter-individual variability …

We hope that you will enjoy the Polyphenols 2022 Congress and that your interactions with your colleagues from many countries will stimulate a creative exchange of ideas and challenges.

Prof. Dr. Andreas Schieber
President of Polyphenols Applications 2022
University of Bonn, Germany
Polyphenols Applications 2022 Speakers

Polyphenols and Extracellular Vesicles: A New Revolution?
Ramaroson Andriansitohaina, France

Effects of Berry (Poly)phenols on Cardiovascular Health: Clinical Evidence and Mechanistic Insights
Ana Rodriguez-Mateos, King's College London, United Kingdom

The Challenge of Modulating the Gut Microbiota with Polyphenols in Metabolic Syndrome Patients
Juan Carlos Espin, Spanish National Research Council, Spain

Beneficial Health Effects of Polyphenol-Rich Fruit Juice in Humans
Elke Richling, University of Kaiserslautern, Germany

Conversion of Phenolic Compounds in Food Fermentations by Lactic Acid Bacteria: Metabolic Pathways and Functional Metabolites
Michael Gänzle, University of Alberta, Canada

Methods of Quantitative Analysis for Cannabinoids in Industrial Hemp
Jennifer Duringer, Oregon State University, USA

Wine Polyphenols and Gut Microbiota
Nenad Naumovski, University of Canberra, Australia

Flavan-3-ols Induces Browning of Adipose Tissues through Sympathetic Nerve Activation
Naomi Osakabe, Shibaura Institute of Technology, Japan

Gut Microbial Metabolism of Dietary Polyphenols in Health and Disease
Jan Claesen, Cleveland Clinic, USA

Innovative Processes for Berry Juice Production and Side Stream Valorization
Nicole Nemetz, University of Bonn, Germany

Towards the Utilization of Cannabinoids as Anticancer Agents
Guillermo Velasco, Instituto de Investigación Sanitaria San Carlos, Spain

Inhibition Mechanism of Catechins on Dietary AGES Absorption and Toxicity
Qian Wu, Hubei University of Technology, China

Biological Activities of Extracts Obtained from Microalgae After the Application of Innovative Processes
Francisco Juan Marti-Quijal, University of Valencia, Spain

Chemical and Sensory Evaluation of Astringency Modulation in Red Wine
Fabian Weber, University of Bonn, Germany

Recovery of Polyphenols from Algerian Medicinal Plants Extracts Assisted by Pulsed Electric Fields
Noelia Pallarés, University of Valencia, Spain

Chemistry and Pharmacology of Cannabinoids
Jan Frederik Stevens, Oregon State University, USA

Inhibition of Oxytosis/Ferroptosis by Cannabinol Requires Mitochondria and is Independent of Cannabinoid Receptors
Pam Maher, The Salk Institute for Biological Studies, USA

Discoloration Caused by Interactions Between Flavonoids and Iron
Jean-Paul Vincken, Wageningen University & Research, The Netherlands

Molecular Taste: Molecular Approaches to Understand Food Polyphenols Astringency and Bitterness
Susana Soares, Universidade do Porto, Portugal

Micellar Formulations Enhance the Post-Digestive Solubility and Bioavailability of Polyphenols
Jan Frank, The University of Hohenheim, Germany

Ocular Delivery of Polyphenols
Yolanda Diebold, Universidad de Valladolid, Spain

Polyphenol-Protein Interactions - Still Many Challenges to Cope With...
Sascha Rohn, Technische Universität Berlin, Germany

Ion Mobility-Mass Spectrometry in Food Analysis
Sonia Sentellas, University of Barcelona, Spain

Procyanidin C1 is a Natural Agent With Senolytic Activity Against Aging and Age-Related Diseases
Yu Sun, The Chinese Academy of Sciences, China

Radioprotective Formula Based on Natural Polyphenols
Elena Obrador, University of Valencia, Spain

Impact of Berries, Cherries and Quinoa Polyphenols on Gut Microbiota & Health
Franck Carbonero, Washington State University-Spokane, USA

Innovative Technologies for the Extraction of Antioxidant Bioactive Compounds from Mushrooms
Mara Calleja, University of Valencia, Spain

Gas Chromatography-Mass Spectrometry Analysis of Cannabinoids: Chemical Diversity Across a Range of Feral Cannabis Plants
Luke Busta, University of Minnesota Duluth, USA

Evaluation of Microstructure and Green Extraction Methodologies for Recovering Polyphenols From Sweet Potato Peel
Juan Manuel Castagnini, University of Valencia, Spain
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Program

– Day 1 –
Wednesday, September 28, 2022

8h00 Welcoming of Participants and Badges Distribution

8h55 Welcome note by Prof. Andreas Schieber, President of Polyphenols Applications 2022, University of Bonn, Germany

9h00 – 9h30 Keynote Introduction: Polyphenols Application 2022: Where We Are Now and What’s Next

Session 1 : Polyphenols & Microbiota – Recent Advances & Perspectives
Chairs: Marvin Edeas, Michael Gänzle
Presentations lengths: 15 minutes + 5 minutes of discussion

9h30 The Challenge of Modulating the Gut Microbiota with Polyphenols in Metabolic Syndrome Patients
Juan Carlos Espín, Spanish National Research Council, Spain

9h50 Conversion of Phenolic Compounds in Food Fermentations by Lactic Acid Bacteria: Metabolic Pathways and Functional Metabolites
Michael Gänzle, University of Alberta, Canada

10h10 – Coffee Break, Networking & Poster Session

11h00 Wine Polyphenols and Gut Microbiota
Nenad Naumovski, University of Canberra, Australia

11h20 Impact of Berries, Cherries and Quinoa Polyphenols on Gut Microbiota & Health
Franck Carbonero, Washington State University-Spokane, USA

11h40 Gut Microbial Metabolism of Dietary Polyphenols in Health and Disease
Jan Claesen, Cleveland Clinic, USA
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12h00 – 12h30 Short Oral Presentations

12h30 – Lunch Break, Networking & Poster Session

Session 2: Polyphenols & Health: What We Know

Chairs: Jan Frank, Jan Frederik Stevens
Presentations lengths: 15 minutes + 5 minutes of discussion

14h00 Flavan-3-ols Induces Browning of Adipose Tissues through Sympathetic Nerve Activation
Naomi Osakabe, Shibaura Institute of Technology, Japan

14h20 Procyanidin C1 is a Natural Agent with Senolytic Activity Against Aging and Age-Related Diseases
Yu Sun, The Chinese Academy of Sciences, China

14h40 The Impact of Cranberry Consumption on Endothelial Function in Healthy Adults
Ana Rodriguez-Mateos, King’s College London, United Kingdom

15h00 Radioprotective Formula Based on Natural Polyphenols
Elena Obrador, University of Valencia, Spain

15h20 – Coffee Break, Networking & Poster Session

16h00 Beneficial Health Effects of Polyphenol-Rich Fruit Juice in Humans
Elke Richling, University of Kaiserslautern, Germany

16h20 Inhibition Mechanism of Catechins on Dietary AGEs Absorption and Toxicity
Qian Wu, Hubei University of Technology, China
Session 3: Technological Innovations in Polyphenols Extraction & Valorization

Chairs: Andreas Schieber, Francisco Barba
Presentations lengths: 12 minutes + 3 minutes of discussion

16h40
Evaluation of Microstructure and Green Extraction Methodologies for Recovering Polyphenols from Sweet Potato Peel
Juan Manuel Castagnini, University of Valencia, Spain

16h55
Recovery of Polyphenols from Algerian Medicinal Plants Extracts Assisted by Pulsed Electric Fields
Noelia Pallarés, University of Valencia, Spain

17h10
Innovative Technologies for the Extraction of Antioxidant Bioactive Compounds from Mushrooms
Mara Calleja, University of Valencia, Spain

17h25
Biological Activities of Extracts Obtained from Microalgae After the Application of Innovative Processes
Francisco Juan Martí-Quijal, University of Valencia, Spain

17h40
Innovative Processes for Berry Juice Production and Side Stream Valorization
Nicole Nemetz, University of Bonn, Germany

17h55 – 18h30 Short Oral Presentations

Lemon Peel Polyphenol Extract Reduces Interleukin-6 Dependent Invasiveness and Matrix Metalloproteinase-9/2 Expression in Human Gastric and Primary Colon Carcinoma Cells
Rosaria Arcone, University of Naples Parthenope, Italy

Effects of Feeding Supplemented with Olea Europaea L. Polyphenols on Plasma Fatty Acid Profile in Lactating Holstein-friesian Cows
Maria Chiara Di Meo, Universita’ Degli Studi Del Sannio - Benevento, Italy

A Green Alternative Approach to Citrus Peel Bio-Waste Disposal: Characterization and Bioactive Potential
Esther Gomez Mejia, Complutense University of Madrid, Spain
Optimization of Extraction Conditions for the Recovery of Bioactive Compounds from Dried Fruits Hard Shells  
Vera Muccilli, Università di Catania, Italy

Polyhydroxynaphthoquinones From Sea Urchins' Waste: Extraction, Characterization and Biomedical Applications  
Stefania Marzorati, Università degli Studi di Milano, Italy

Polyphenols and Waste Proteins for Implementation of Bioadhesives with High Water-Resistance and Antibacterial Properties for Wound Treatment Applications  
Alessandra Napolitano, University of Naples Federico II, Italy

18h30 End of Polyphenols Applications 2022 Day 1

Abstract Submission
Program

Day 2 – Thursday, September 29, 2022

8h50 Introduction Note of Day 2

Session 4: Sensory Aspects of Polyphenols

Chairs: Fabian Weber, Susana Soares
Presentations lengths: 15 minutes + 5 minutes of discussion

9h00 Chemical and Sensory Evaluation of Astringency Modulation in Red Wine
Fabian Weber, University of Bonn, Germany

9h20 Discoloration Caused by Interactions Between Flavonoids and Iron
Jean-Paul Vincken, Wageningen University & Research, The Netherlands

9h40 Molecular Perception of Astringency & Bitter Taste of Tannins in Food
Susana Soares, Faculdade de Ciências da Universidade do Porto (FCUP), Portugal

10h00 Ion Mobility–Mass Spectrometry in Food Analysis
Sonia Sentellas, University of Barcelona, Spain

10h20 Polyphenol-Protein Interactions - Still Many Challenges to Cope With...
Sascha Rohn, Technische Universität Berlin, Germany

10h40 – Coffee Break, Networking & Poster Session

11h20 – 12h30 Short Oral Presentations

A New Colorimetric App for Polyphenols Detection in Beverages
Henar Muñoz Cimadevilla, BQC Redox Technologies, Spain
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12h30 pm – Lunch Break, Networking & Poster Session

Session 5: Innovations & Perspectives in Polyphenols Applications

Chairs: Sascha Rohn, Jean-Paul Vincken

Presentations lengths: 15 minutes + 5 minutes of discussion

14h00

Polyphenols and Extracellular Vesicles: A New Revolution?
Ramaroson Andriantsitohaina, France

14h20

Ocular Delivery of Polyphenols
Yolanda Diebold, Universidad de Valladolid, Spain

14h40

Micellar Formulations Enhance the Post-Digestive Solubility and Bioavailability of (Poly)phenols
Jan Frank, The University of Hohenheim, Germany

15h00

Flavonoid-Oxidation Derive Benzofuranones: An Emerging Case of Novel Antioxidants Development
Hernan Speisky, University of Chile, Chile

15h15 – Coffee Break, Networking & Poster Session

16h00 – 18h00 Short Oral Presentations

Antiviral Activity of European Black Elderberry Polyphenols
Stephan Plattner, ElderCraft / IPRONA, Italy

Nanoformulated Chestnut Wood Mud as a Source of Ellagic Acid for Dermo-cosmetic Applications
Lucia Panzella, University of Naples "Federico II", Italy

Anti-Dyslipidemic Effect of the Main Olive Oil Polyphenol Oleacein in the APOE-KO Mice Model of Atherosclerosis
Fátima Paiva-Martins, University of Porto, Portugal
Targeting Glioblastoma Invasion and Survival with Cannabis-derived Flavonoids
Akeem Gardner, Canurta Inc, Canada

Poly(Glycerol-Debacate)-Based Delivery Systems, Alternative Routes for Polyphenols Administration
Alessio Massironi, Università di Milano, Italy

Potential Prevention and Treatment of SARS-COV-2-induced Infection by Tannic Acid, Corilagin, or TGG
Roger Gaudreault, Université de Montréal, Canada

18h00 Polyphenols Applications 2022 Awards

18h15 End of Polyphenols Applications 2022 Day 2
Cannabis 2022

Medical Cannabis, Cannabinoids and Derivatives:
Recent Advances and Applications

Aims and Objectives:
Cannabis 2022 aims to evaluate the constituents of cannabis and medical cannabis, mainly cannabinoids, flavonoids and their derivatives.

We will focus on the identification, characterization and isolation of different constituents in cannabis.

We will highlight recent studies and research in all related fields: health, wellbeing & food.

President and Chairman of the Workshop

Prof. Jan Frederik Stevens,
Oregon State University
USA
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**Program**

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**Cannabis 2022 Topics**

8h50  Welcome note & introduction

**Session 1 – General Introduction on Cannabis & Derivatives**

9h00  Chemistry and Pharmacology of Cannabinoids  
*Jan Frederik Stevens, Oregon State University, USA*

9h25  Gas Chromatography-Mass Spectrometry Analysis of Cannabinoids: Chemical Diversity Across a Range of Feral Cannabis Plants  
*Luke Busta, University of Minnesota Duluth, USA*

9h50  The Comparison Between HPLC-MS/MS and HPLC-PDA Analysis  
*Jennifer Duringer, Oregon State University, USA*

10h15  Coffee break

**Session 2 – Mechanisms of Action of Cannabinoids**

10h45  Inhibition of Oxytosis/Ferroptosis by Cannabinol Requires Mitochondria and is Independent of Cannabinoid Receptors  
*Pam Maher, The Salk Institute for Biological Studies, USA*

**Session 3 – Therapeutic Potential of Cannabinoids & Approaches for Further Development**

11h10  Towards the Utilization of Cannabinoids as Anticancer  
*Guillermo Velasco, Instituto de Investigación Sanitaria San Carlos, Spain*

11h25  Abstracts Presentations

14h30  End of Cannabis 2022