INTERNATIONAL SOCIETY OF ANTIOXIDANTS

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
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<td>Effects of Berry (Poly)phenols on Cardiovascular Health: Clinical Evidence and Mechanistic Insights</td>
<td>Ana Rodríguez-Mateos, King’s College London, United Kingdom</td>
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<td>Juan Carlos Espin, Spanish National Research Council, Spain</td>
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<td>Elke Richling, University of Kaiserslautern, Germany</td>
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<td>Michael Gänzle, University of Alberta, Canada</td>
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<td>Methods of Quantitative Analysis for Cannabinoids in Industrial Hemp</td>
<td>Jennifer Duringer, Oregon State University, USA</td>
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<td>Flavan-3-ols Induces Browning of Adipose Tissues through Sympathetic Nerve Activation</td>
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<td>Targeting Glioblastoma Invasion and Survival with Cannabis-derived Flavonoids</td>
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<td>Towards the Utilization of Cannabinoids as Anticancer Agents</td>
<td>Guillermo Velasco, Instituto de Investigación Sanitaria San Carlos, Spain</td>
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<td>Inhibition Mechanism of Catechins on Dietary AGEs Absorption and Toxicity</td>
<td>Qian Wu, Hubei University of Technology, China</td>
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<td>Jean-Paul Vincken, Wageningen University &amp; Research, The Netherlands</td>
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<td>Molecular Taste: Molecular Approaches to Understand Food Polyphenols Astringency and Bitterness</td>
<td>Susana Soares, Universidade do Porto, Portugal</td>
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<td>Polyphenol-Protein Interactions - Still Many Challenges to Cope With...</td>
<td>Sascha Rohn, Technische Universitat Berlin, Germany</td>
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<td>Sonia Sentellas, University of Barcelona, Spain</td>
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<td>Procyanidin C1 is a Natural Agent With Senolytic Activity Against Aging and Age-Related Diseases</td>
<td>Yu Sun, The Chinese Academy of Sciences, China</td>
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<td>Radioprotective Formula Based on Natural Polyphenols</td>
<td>Elena Obrador, University of Valencia, Spain</td>
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<td>Impact of Berries, Cherries and Quinoa Polyphenols on Gut Microbiota &amp; Health</td>
<td>Francisco Velasco, Washington State University-Spokane, USA</td>
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15th World Congress on Polyphenols Applications
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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
Juan Carlos Espín, Spanish National Research Council, Spain

Session 1: Polyphenols & Microbiota – Recent Advances & Perspectives

Chair: 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
12h00 – 12h30  Short Oral Presentations

Standardized Polyphenol Mixture from Poplar-Type Propolis Modulates Gut Microbiota in Healthy and Diseased Subjects
Maria Daglia, University of Naples Federico II, Italy

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

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

18h30      End of Polyphenols Applications 2022 Day 1

20h00      Dinner with Speakers – Reserved for ticket holders only
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– 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-Sebacate)-Based Delivery Systems, Alternative Routes for Polyphenols Administration
Alessio Massironi, Università di Milano, Italy

Grape Cane Stilbenoids as Biopesticides in Organic Viticulture
Paul Besrukow, Geisenheim University, Germany

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

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

Lentil Protein and Tannic Acid Interaction Limits In Vitro Peptic Hydrolysis and Alters Peptidomic Profiles of the Proteins
Ruth Takyiwaah Boachie, Wageningen University & Research, The Netherlands

Leaf Development in Chilean Bean Landraces Affects Phenolic Composition and A-Glucosidase Inhibition
Alberto Javier Burgos Edwards, Centro de Estudios en Alimentos Procesados, Chile

Development of a Tool to Accelerate the Degradation Process on Rosé Wines
Jennifer Moriones, UPNA, Spain

Dietary Polyphenol Intake and Gastric Cancer: A Systematic Review and Meta-analysis
Marcela de Araújo Fagundes, AC Camargo Cancer Center, Brazil

Effects of Urolithin A on Mitochondrial Parameters in a Cellular Model of Early Alzheimer Disease
Gunter Peter Eckert, Justus-Liebig University of Giessen, Germany

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
15th World Congress on Polyphenols Applications  
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Program

Cannabis 2022 Topics

8h50  Welcome note & introduction

Session 1 – General Introduction on Cannabis & Derivatives

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

9h00

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

9h25

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

9h50

10h15 Coffee break

Session 2 – Mechanisms of Action of Cannabinoids

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

10h45

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

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

11h10

11h25 Abstracts Presentations

14h30 End of Cannabis 2022