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 organized on September 28-30, 2022. This year, we are optimistic that we can meet in-person in Valencia, Spain. We will of course keep you updated if our initial plans change. In both cases, live streaming will be available for those who would rather participate remotely.

This year’s edition will also 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.

We particularly welcome contributions to the following areas of research on polyphenols:

- 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

This year 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.

Abstracts are welcome for all the above-mentioned topics. A significant part of the conference will be allocated to presentations from young scientists. Therefore, we particularly encourage postdoctoral fellows and advanced doctoral students to submit abstracts for consideration of potential inclusion as oral or poster presentations.

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?
Ramarnoran Andriansitohaina, France

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

Inhibition Mechanism of Catechins on Dietary AGs Absorption and Toxicity
Qian Wu, Nabel University of Technology, China

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

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

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

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

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

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

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

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

Evaluation of Cell Microstructure and Supercritical Fluid Extraction of Polyphenols from Sweet Potato
Juan Manuel Castagnini, University of Valencia, Spain

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

www.polyphenols-site.com
**15th World Congress on Polyphenols Applications**

September 28-30, 2022 – Valencia, Spain

**Program**

– Day 1 –

Wednesday, September 28, 2022

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<th>Event</th>
<th>Speaker/Institution</th>
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<tr>
<td>8h00</td>
<td>Welcoming of Participants and Badges Distribution</td>
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<td>8h55</td>
<td>Welcome note by Prof. Andreas Schieber, President of Polyphenols Applications 2022, University of Bonn, Germany</td>
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<td>9h00</td>
<td>Keynote Introduction: Polyphenols Application 2022: Where We Are Now and What’s Next</td>
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**Session 1: Polyphenols & Microbiota – Recent Advances & Perspectives**

*Chairs: Marvin Edeas, Michael Gänzle*

Presentations lengths: 15 minutes + 5 minutes of discussion

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<tr>
<td>9h30</td>
<td>The Challenge of Modulating the Gut Microbiota with Polyphenols in Metabolic Syndrome Patients</td>
<td>Juan Carlos Espin, Spanish National Research Council, Spain</td>
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<tr>
<td>9h50</td>
<td>Conversion of Phenolic Compounds in Food Fermentations by Lactic Acid Bacteria: Metabolic Pathways and Functional Metabolites</td>
<td>Michael Gänzle, University of Alberta, Canada</td>
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**10h10 – Coffee Break, Networking & Poster Session**

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<tr>
<td>11h00</td>
<td>Wine Polyphenols and Gut Microbiota</td>
<td>Nenad Naumovski, University of Canberra, Australia</td>
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<tr>
<td>11h20</td>
<td>Impact of Berries, Cherries and Quinoa Polyphenols on Gut Microbiota &amp; Health</td>
<td>Franck Carbonero, Washington State University-Spokane, USA</td>
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<tr>
<td>11h40</td>
<td>Gut Microbial Metabolism of Dietary Polyphenols in Health and Disease</td>
<td>Jan Claesen, Cleveland Clinic, USA</td>
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September 28-30, 2022 – Valencia, Spain

Program

12h00 – 12h30 Short Oral Presentations (3 slots)

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
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Session 3: Technological Innovations in Polyphenols Extraction & Valorization

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

16h40  Evaluation of Cell Microstructure and Supercritical Fluid Extraction of Polyphenols from Sweet Potato
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 (3 slots)

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

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

You can submit your abstract [here](#).

18h30  End of Polyphenols Applications 2022 Day 1
15th World Congress on Polyphenols Applications
September 28-30, 2022 – Valencia, Spain

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– Day 2 –
Thursday, September 29, 2022

8h50   Introduction Note of Day 2

Session 4: Sensory Aspects of Polyphenols

Chair: 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 (7 slots)

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

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
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

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