8th World Convention Stevia Tasteful 2018

World Stevia Organization

Stevia Tasteful 2018

Science, Formulation & Exhibition

June 4 - 5, 2018
Berlin, Germany

WORLD STEVIA ORGANIZATION

www.wso-site.com

8th WSO World Congress on Stevia Tasteful 2018

Science, Formulation & Extraction
Food & Beverages Formulation: The Subtle Balance

June 4-5, 2018 - Berlin, Germany

Dear Colleagues,

As President of the World Stevia Organisation (WSO), it is a pleasure for use to announce the organization of the **8th World Congress on Stevia,** which will be organized in Berlin on June 4-5, 2018.

Stevia as a Preventive Factor

Stevia is currently considered as the "green gold", as natural sweetener used to reduce sugar and synthetic sweeteners as aspartame or sucralose. Moreover, Stevia as a natural and antioxidant ingredient can be used for the prevention of chronicle diseases such as obesity, diabetes, cancer, and cardiovascular diseases.

Why a specific Conference dedicated to Food and Beverages Formulated with Stevia?

Nowadays, consumers need a neutral taste adapted to their culture. During the fourth previous editions of Stevia World Congress held since 2010, the main question remained unanswered was "How to limit and hide the after-taste of Stevia in Food & Beverages?"

The main challenge of the 8th World Congress on Stevia and Food & Beverages will to find the perfect combination in terms of formulation and to determinate how to reach the perfect balance. The scientific committee will invite academic, experts and industrials to present their latest researches, innovations and successful products formulated with Stevia.

We are still sure that Stevia will play a major role in the prevention of many chronicle diseases. For the future, I'm afraid of the risk that consumers don't accept Stevia formulated products if industrials can't anticipate and find an urgent solution for Stevia Taste. We have to react quickly to insure the future of Stevia as natural sweetener.

What will be the objectives of Stevia Tasteful 2018?

- To highlight recent advances and scientific researches on Stevia and Stevia related products
- To discuss about the impact of formulation on Stevia taste and after-taste
- To present new innovations to reduce Stevia After Taste in finish products
- To show the latest marketing tools used to present Stevia and persuade consumers to use it

Discussion: At the end of the convention, we will have a strategic discussion about Stevia and the latest regulatory issues and we will talk about Stevia Business Development-Current Status and Future Growth.

Stevia Tasteful Awards 2018

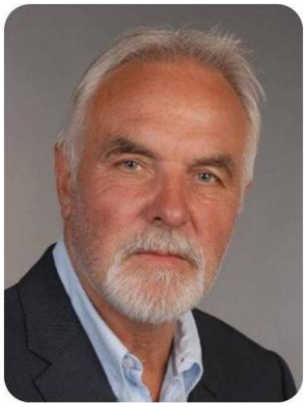
At the end of the conference, the attendees will be invited to taste and judge some Stevia Finish Products and Stevia Extracts in order to discerned the Stevia Tasteful Awards 2018. Two categories will be awarded:

- Stevia Tasteful Award - Finish Product Category
- Stevia Tasteful Award - Extract Category

We look forward welcoming you in Berlin in June 2018.

Prof. Gerd Birkenmeier
University of Leipzig, Germany
President of WSO
president@wso-site.com

Stevia Tasteful 2018 Speakers



Sugar: Devil or savior - looking behind the scene

Gerd Birkenmeier, *President of WSO, University of Leipzig, Germany*

Prof. Gerd Birkenmeier, current President of World Stevia Organization, provides 5 strategies to reduce the sugar intake and to promote the use of Stevia:

- Increasing the efforts in education of children and adults to use traditional diets over highly processed foods and drinks that parallels to the increase in obesity, diabetes, and other diet-related chronic diseases.
- To influence policy makers and health professionals to promote public regulation and market intervention such as taxation, pricing, ban, and restriction of advertising.
- To promote the use of naturally-sourced stevia sweetener products that can improve the diets and health of people globally by addressing sugars and calories in food.
- To support sustainable stevia production through responsible cultivation and ensuring accurate analytical methods for measuring the purity of stevia extracts.
- To promote Stevia cultivation through farmers in developing countries to prevent later cost-expenditures of their healthcare system.

Mechanisms of sugar toxicity reside in intestinal hormone responses – sweet solutions of the problem?-

Andreas Pfeiffer, *Charité Universitaetsmedizin Berlin, Germany*

According to a recent publication from Prof. Pfeiffer: "Excessive sugar intake is associated with higher risk of insulin resistance and type 2 diabetes (T2D). Recently, Prof. Pfeiffer reported that Palatinose (isomaltulose), a 1,6-linked glucose-fructose dimer that is completely digested and absorbed in the small intestine, improved glucose homeostasis and prevented fatty liver compared with 1,2-linked sucrose. Palatinose intake reduced postprandial glucose-dependent insulinotropic peptide (GIP) and insulin release in mice. Postprandial insulin secretion and glycemic excursions are regulated by the stimulation of incretin hormones.

These intestinal peptides are glucagon-like peptide 1 (GLP-1) and GIP.

Sugar & ageing: how to decrease all related diseases to glycation?

Marvin Edeas, *Institut Cochin, Université Paris Descartes, France*

The advanced glycation end products (AGEs) are one strategic target in many clinical studies. How can they affect mitochondria and microbiota homeostasis? There effects on oxidative stress, Redox status, genes expressions, inflammation, metabolism, ATP production and how they shape the gut and skin microbiota? I will highlight the following points:

- Can AGE inhibitors and stevia will be a potential strategy for the prevention of lifestyle-related diseases such as diabetic complications?
- Can stevia be used as a pharmaceutical drugs or dietary supplements?
- What is the importance and level of contribution of food-derived advanced glycation end products to the body pool of AGEs?
- What is the impact of stevia on mitochondria and cellular metabolism?
- What is the impact of stevia on gut microbiota? Can stevia affect the diversity and quality of gut microbiota?

What is going on in Stevia agriculture, where we are now?

Buhara Yücesan, *Abant Izzet Baysal University, Turkey*

In spite of popularity of Stevia in public-manner, Stevia is not able to take place where it deserves. With a closer look on the efforts on Stevia science, agricultural costs affected by breeding, selection, harvesting, quality control, climate seems pivotal problems to development of the business. It is noteworthy to say that leaf quality in terms of composition of the value-added steviol glycosides should be considered as a strategy for the science and business.The recent studies on genetic make up of steviol glycoside mechanisms as an alternative approach on breeding studies, and efficient stevia seedling production techniques seem to have potential to put aside all short-comings in near future.

Biochemical properties of hydroponic stevia rebaudiana extract in the stress conditions

Anush Aghajanyan, *Yerevan State University, Armenia*

Stevia rebaudiana contains diterpenoid glycosides (steviosides) having attracted interest for its potential use as sweetener, at the same time it has antihypergicemic effects. Steviosides demonstrate increased insulin secretion and sensitivity in different animal models.The wild species of this plant do not grow in Armenia, so hydroponic Stevia is of interest for commercial aims everywhere. In the present study Dr Aghajanyan's team has evaluated some biochemical properties of hydroponic SR aqueous extract in a hyperglycemia induced by immobilization stress in rabbits after oral treatment. The results of this study will be presented in Berlin.

HPTLC analysis of steviol glycosides and (iso)steviol in Stevia products

Gertrud Morlock, *Justus Liebig University Giessen, Germany*

Newest results on analysis of steviol glycosides are presented by Prof. Morlock. In certain food milieus or by processing or during storage, steviol glycosides may degrade. Thus, a planar chromatographic method was developed that separated both at one go, the group of steviol glycosides as well as their reported breakdown products steviol and isosteviol. Also, it is demonstrated that a fast and efficient analytical method strongly supports quality control. An example of a sample is given that claimed to contain steviol glycosides, but was falsified with cheaper synthetic sweeteners.

Stevia cultivation at higher latitudes in Europe - a case study from southwestern Germany

Sebastian Munz, *University of Hohenheim, Germany*

For the optimization of agronomic practices in stevia cultivation at higher latitudes in Europe, more knowledge is required concerning the influence of temperate environmental conditions on plant growth and yield of steviol glycosides. Our study demonstrated that high yields of dry leaves (6000–7800 kg ha−1), total SVglys (720–1023 kg ha−1), and rebaudioside A (RA, 220–376 kg ha−1) can be achieved. Further, we highlight the importance of future studies regarding physiological responses of stevia under dynamic environmental conditions also taking into account genotypic architectural traits in relation to light interception.

Insulin-Mimetic and Antioxidant Activities exerted by steviol glycosides in a Glut4-expressing cell model

Cecilia Prata, *University of Bologna, Italy*

Stevia rebaudiana Bertoni possess a high content of sweet diterpenoid glycosides in its leaves, mainly stevioside and rebaudioside A, which are used as noncaloric, natural sweeteners. The aim of the study was to deepen the knowledge about the insulin-mimetic effect exerted by four different mixtures of steviol glycosides, rich in stevioside and rebaudioside A, in a cell model expressing the insulin dependent glucose transporter, Glut4. The potential antioxidant activity of steviol glycosides was also assessed, as oxidative stress is associated with diabetes. The insulin-mimetic effect and the antioxidant property exerted by steviol glycosides suggest their potential beneficial role in the co-treatment of diabetes and in health maintenance.

Reduction of sugar by bakery products through the application of stevia extracts

Iryna Smetanska, *Hochschule Weihenstephan-Triesdorf, Germany*

How to combine marketing, consumers and science?

Sai Prakash Chaturvedula, *Wisdom Natural Brands, USA*

Stevia rebaudiana (Bertoni) Bertoni is a wild perennial herb of the Asteraceae (Compositae) family native to Paraguay and Brazil, but now grown commercially in several countries, including Japan, Taiwan, Korea, China, Thailand, Africa, and Indonesia. Extracts of the leaves of S. rebaudiana leaves have been used for centuries to sweeten food and beverages in Japan, South America and China. The major constituents of the leaves of S. rebaudiana are the remarkably high-potency sweet tasting glycosides such as stevioside, and rebaudiosides A of the diterpene steviol (ent-13-hydroxykaur- 16-en-19-oic acid) apart from several minor steviol glycosides.

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Agenda

Day 1 – June 4, 2018

08:00 **Welcoming & Registration of Attendees**

08:55 **Opening of the 8th WSO World Congress on Stevia Tasteful**

Session 1: Recent advances on Stevia sciences

09:00 **Sugar: Devil or savior - looking behind the scene**
Gerd Birkenmeier, *President of WSO, University of Leipzig, Germany*

09:30 **James May: pioneer in natural health and father of stevia**
Michael May, *Wisdom Natural Brands, USA*

10:00 **Sugar & ageing: how to decrease all related diseases to glycation?**
Marvin Edeas, *Institut Cochin, Université Paris Descartes, France*

10:30 Coffee Break

11:15 **Mechanisms of sugar toxicity reside in intestinal hormone responses – sweet solutions of the problem?**
Andreas Pfeiffer, *Charité Universitaetsmedizin Berlin, Germany*

11:45 **Insulin-mimetic and antioxidant activities exerted by steviol glycosides in a Glut4-expressing cell model**
Cecilia Prata, *University of Bologna, Italy*

12:15 **Questions & discussion**

12:30 Lunch Break

14:00 **Leaf extracts of stevia rebaudiana protect beta cells against gluco- or lipotoxicity**
Marco Bugliani, *University of Pisa, Italy*

14:15 **Stevioside potentiates trpm5 channels which leads to increased taste perception and prevents the development of diabetes in mice**
Koenraad Philippaert, *VIB - KU Leuven Center for Brain & Disease Research, Belgium*

14:30 **TRPM5 modulation by rebaudioside A and effects on glucose homeostasis in type 2 diabetic humans**
Caroline Simoens, *KU Leuven, Belgium*

Session 2: Cultivation, extraction, purification & characterisation of Stevia

14:45 **Stevia cultivation at higher latitudes in Europe - a case study from southwestern Germany**
Sebastian Munz, *University of Hohenheim, Germany*

15:15 **Biochemical properties of hydroponic stevia rebaudiana extract in the stress conditions**
Anush Aghajanyan, *Yerevan State University, Armenia*

15:45 Coffee Break

16:15 **HPTLC analysis of steviol glycosides and (iso)steviol in Stevia products**
Gertrud Morlock, *Justus Liebig University Giessen, Germany*

16:45 **What is going on in Stevia agriculture, where we are now?**
Buhara Yücesan, *Abant Izzet Baysal University, Turkey*

17:15 **Stevia 2018: questions and answers between delegates**
Practical cases from Asia, African Case, South America Case

18:00 **End of the first day**

20:00 **Stevia Tasteful Dinner**

Day 2 – June 5, 2018

08:55 **Opening of the second day**

Session 3: Stevia in Practice – Formulation, Innovations & Technologies

09:00 **Presentation of SW227: a stevia variety with low bitterness and aftertaste for fresh and dry leaf market**
Cheryl Parris, *S&W Seed Company, USA*

09:30 **Reduction of sugar by bakery products through the application of stevia extracts**
Iryna Smetanska, *Hochschule Weihenstephan-Triesdorf, Germany*

10:00 **Different production methods for the evolution of first to second, and now third generation of Steviol glycosides**
Oliver Yu, *Sweegen, USA*

Coffee Break, Stevia Tasting & Speed Collaboration:
10h30 – 11h30

Stevia Tasting

The Stevia Tasting allows all attendees to taste and discover the extracts and finish products with Stevia.

The sensory analysis of attendees will be appreciated: such as general taste of the product, first impression taste, after taste, odor, appearance, and other organoleptic criteria.

Among the products/extracts which will be presented:

- Lemon black ice tea *(Sweegen, USA)*
- Teas-Hibiscus Mate *(Wisdom Natural Brands, USA)*
- Water Drops-Mixed Berry *(Wisdom Natural Brands, USA)*
- Sweet Drops-Caramel *(Wisdom Natural Brands, USA)*
- Mulli-Zucker (MGO GmbH, Germany)

Stevia Convention Speed Collaboration

This session is dedicated to all attendees, academics, start-ups and industrials who are looking for collaboration:
each attendee can present his project during one or two minutes to other attendees.

If you would like to take part to the Stevia Tasting or Stevia Convention Speed Collaboration, please contact us.

11:30 **Sugar reduction in food applications with rebaudioside M, produced by fermentation**
Marco van den Berg, *DSM Biotechnology Center, The Netherlands*

11:45 **Cultivated and landraces stevia rebaudiana diversity: Developping SSR and SNP identification through reduced-representation library**
Valérie Schurdi-Levraud, *INRA Université de Bordeaux, France*

12:00 **Effects of stevia on synaptic plasticity and NADPH-oxidase level of CNS in conditions of metabolic disorders caused by fructose**
Armin Isoyan, *Orbeli Insitute of Physiology, Armenia*

12:15 Lunch Break

Session 4: Stevia 2018 - Strategic Discussion

14:00 **How to combine marketing, consumers and science?**
Sai Prakash Chaturvedula, *Wisdom Natural Brands, USA*

14:40 **Enzymatic method for quantification of stevioside**
Jamorn Somana, *Mahidol University, Thailand*

14:55 **Differences on composition of stevia leaves and branches affect extract properties and membrane performance during clarification by microfiltration**
Beatriz Torrestiana-Sanchez, *Instituto Tecnológico de Veracruz, México*

15:10 **Discussion - Questions/Answers with Attendees and Speakers**

15:30 Coffee Break

16:00 **Feedback and suggestions for future WSO**

16:30 **Father of Stevia Award Ceremony**

17:00 **Conclusion of Stevia Tasteful 2018**

Practical Information

Conference Venue / Special rate for accommodations

The convention will be held at **Steigenberger Hotel Berlin -** Los-Angeles-Platz 1 | 10789 Berlin, Germany.

Please visit the conference website for all practical information about the special rate for accommodations.

Registration

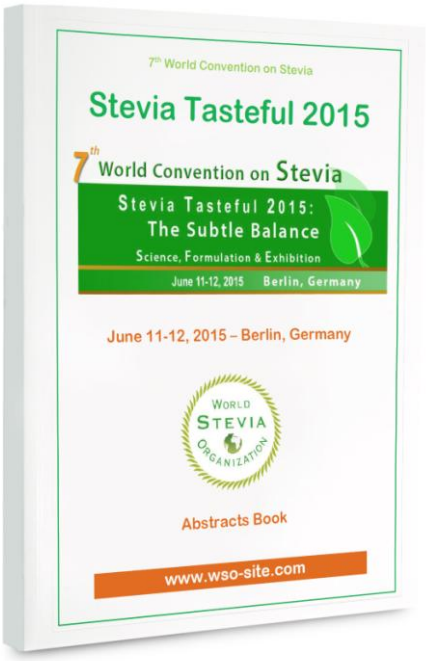
	Until March 15, 2018	From March 16 to May 22, 2018	From May 23, 2018 & On site
Academics			
WSO Members	€ 145	€ 275	€ 425
Normal Rate	€ 395	€ 525	€ 675
Industrials			
WSO Members	€ 645	€ 745	€ 900
Normal Rate	€ 895	€ 995	€ 1150

To register, please use the online registration form on www.wso-site.com or by clicking here.

Special Discount for WSO Members

As member of WSO, you can have a discount of **250€** on your registration fees by using the promotional code you received by email. Please take on consideration that this code is available **only for members** already confirmed. For further information, please contact us.

Abstracts Books



Each participant will receive a detailed abstract on each session and a summary and/or power point presentations of different interventions.

If you cannot participate in the convention, you may order the abstracts book by clicking here.

You can also order the abstracts books of the previous editions.

Contacts

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