



**3rd WORLD CONGRESS ON
GLYCATION**

GLYCATION - MAILLARD 2016

GLYCATION 2016: TARGETING GLYCATION IN HEALTH & DISEASES

MAY 26-27, 2016

HUNGARIAN ACADEMY OF SCIENCES

BUDAPEST, HUNGARY

3rd World Congress on

Maillard Reaction & Glycation

Health & Diseases – Agro-Food Industries

May 26-27, 2016

Academy of Sciences, Budapest, Hungary

Scientific Agenda



www.glycation-site.com

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Maillard Reaction & Glycation**

**May 26-27, 2016
Academy of Sciences, Budapest, Hungary**

Dear Colleagues,

On behalf of the International Society of Antioxidants in Nutrition and Health (ISANH), it is a pleasure to welcome you for the **3rd World Congress on Maillard Reaction** which will be held at **Academy of Sciences, Budapest, Hungary** on **May 26-27, 2016**.

The Maillard Reaction Congress will discuss the following sessions :

1. **Recent Scientific Advances & Directions**
2. **Maillard Reaction in Pathologies & Diseases**
3. **How to Evaluate Glycation & Glycated - End Products in Health & Diseases?**
4. **AGEs & RAGEs: Strategies & Innovations**

To conclude this congress, a **general discussion** will be held between speakers, scientists and industry sector about Maillard Reaction, Glycation and what about tomorrow. We will discuss about where we are now in the glycation science and what kind of strategies we need urgently to target clinical diseases related to glycation.

The other point is how we can clarify the situation with the agro-food industry mainly in term of how to decrease the intake of the glycated products in food.

We look forward welcoming you during Maillard Reaction congress.

Ladislav Robert - President of Maillard Reaction 2016

Marvin Edeas - Chairman of the Scientific Committee

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Maillard Reaction & Glycation

May 26-27, 2016
Academy of Sciences, Budapest, Hungary

Day 1: May 26, 2016

Maillard Reaction & Glycation in Health & Diseases

7h30 Opening of Registration – Welcoming of attendees

8h55 Introduction Remarks by Chairpersons
Prof. Ladislav Robert & Prof. Marvin Edeas

With the participation of the honorary committee:

Prof. Gyorgy Kosztolanyi, President of the Medical Section of the Hungarian Academy of Sciences, Budapest, Hungary

Prof. Tamas Freund, Vice President of Hungarian Academy of Sciences, Budapest, Hungary

Prof. Anna Kadar, Medical University Semmelweis, Budapest, Hungary

Prof. Karoly Kocsis, President of the council of external members of the Hungarian Academy of Sciences

Prof. Karoly Lapis, Medical University Semmelweis, Budapest, Hungary

Prof. Sylvester Vizedy, Past President of Hungarian Academy of Sciences, Budapest, Hungary

9h30 Science in Hungary & Hungary in Science

Istvan Hargittai, Budapest University of Technology and Economics, Budapest, Hungary

Session 1: Recent Scientific Advances & Directions

10h00 Introductory Lecture: The History of Redox Biology, from "Reduktiones" of Hans von Euler to Free Radicals, exemplified by the Maillard Reaction and the Elastin Receptor, their role in Atherogenesis
Ladislav Robert & Jacqueline Labat-Robert, Hôtel Dieu, Paris, France

10h45 Coffee Break & Posters Session

11h15 Oxidative Stress, Glycation & Redox 2016: Questions, controversies & perspectives in Health and Diseases
Marvin Edeas, Chairman of ISANH, Paris, France

11h45 Extracellular matrix glycation, redox status and cross-linking
Sylvie Ricard-Blum, Université Lyon 1, Lyon France

12h15 Poly(ADP-ribose) signalise in oxidative stress
Laszlo Virag, University of Debrecen, Debrecen, Hungary

12h45 Lunch Break & Posters Session

14h00 Concepts and misconceptions regarding the nature of oxygen free-radicals in the living systems
Imre Zs Nagy, University of Debrecen, Debrecen, Hungary

Session 2: Maillard Reaction in Pathologies & Diseases

- 14h30 **AGE-RAGE interaction in fibrosis of the eye**
Ram Nagaraj, University of Colorado School of Medicine, Colorado, USA
- 15h00 **Microbiota & Maillard Reaction: Metabolization of Maillard reaction products by the human colonic microbiota**
Michael Hellwig, Technische Universität, Dresden, Germany

15h30 Coffee Break & Posters Session

- 16h00 **AGE-RAGE axis: implication in fibrosis and aging**
Eric Boulanger, INSERM-Lille2, Lille, France
- 16h30 **Effect of AGE intake on inflammation and ageing: state of sciences and perspectives**
Ivan Bautmans, Vrije Universiteit, Brussels, Belgium
- 17h00 **Supra-additive impact of mitochondrial dysfunction and subsequent oxidative stress in central nervous system pathology**
Beata Sperlagh, Hungarian Academy of Sciences, Hungary
- 17h30 **Short oral presentations upon abstracts submission**

Among the presentations selected:

AGE accumulation contributes to synaptic dysfunction
Shirley ShiDu Yan, University of Kansas, USA

Role of advanced glycation end products on vascular remodelling processes
Diana Bou-Teen, Health Research Institute of Santiago (IDIS), Spain

Glycated Human Albumin Triggers Mitochondrial Metabolism of Preadipocyte Cells
Philippe Rondeau, UMR Diabète Athérombose Thérapies Réunion Océan Indien (DéTROI), France

Glycation Abolishes The Cardioprotective Effects of Albumin during Ischemia-Reperfusion
Faadiel Essop, Stellenbosch University, South Africa

Prevention of glycosylation by natural and synthetic antioxidants
Izabela Sadowska-Bartosz, University of Rzeszów, Poland

Glycated apolipoprotein A-I exacerbates cellular senescence in human umbilical vein endothelial cells accompanied by impaired insulin secretion activity and embryo toxicity
Kyung-Hyun Cho, Yeungnam University, Korea

Endothelial cell dysfunction caused by diabetes and age related reactive dicarbonyls
Andreas Simm, Martin-Luther-University Halle-Wittenberg, Germany

High-density lipoprotein oxidation in type 2 diabetic patients: is it a glycation-catalyzed process?
Annunziata Lapolla, University of Padova, Italy

SRAGE and esRAGE levels show significant inverse relationship to hsCRP in lean, but not in centrally obese apparently healthy adolescents
Katarina Sebekova, Comenius University Medical Faculty, Bratislava, Slovakia

Trans-epithelial transport of Maillard reaction products (MRPs) through the GLUT receptor in a Caco-2 cell line
Mirko Betti, University of Alberta, USA

Glucose modification and oxidation of macrophage migration inhibitory factor in Alzheimer's disease
Omar Kassaar, University of Bath, United Kingdom

Momordica charantia (bitter melon) extracts promote angiogenesis in vitro via the receptor for advanced glycation endproducts (RAGE)
Nessar Ahmed, School of Healthcare Science, Manchester Metropolitan University, United Kingdom

Glucose affects aspirin-induced acetylation of cyclooxygenase 1 (COX-1) in human platelets
Francesco Finamore, University of Geneva, Switzerland

Nitric Oxide Metabolites and Dinitrosyl Iron Complexes in the Non-Enzymatic Glycation Reactions
Alexey F. Topunov, Bach Institute of Biochemistry, Research Center of Biotechnology of the Russian Academy of Sciences, Russia

An insect model to investigate the effect of hyperglycaemia on immunity
Marjorie J. Gibbon, University of Bath, United Kingdom

Glycation impairs hepatic lipid metabolism and glucose tolerance in high-fat diet-induced obese rats, contributing to the onset of NAFLD
Paulo Matafome, University of Coimbra, Portugal

Antioxidant Properties of Heterocyclic Maillard Reaction Intermediates
Clemens Kanzler, Berlin Institute of Technology, Germany

18h30 End of First Day

20h00 Speakers Dinner

To participate to this dinner, please register online.

Day 2: May 27, 2016

8h55 Introduction of the second day

9h00 Diet-induced accumulation of AGEs contribute to metabolic diseases onset by interfering with SREBP-1c activity

Raffaella Mastrocola, University of Turin, Turin, Italy

9h30 The role of hemoglobin derived heme in the pathogenesis of vascular disorders

György Balla, University of Debrecen, Debrecen, Hungary

10h00 Exercise and brain function: is it redox regulated?

Zsolt Radak, University of Physical Education, Budapest, Hungary

10h30 Coffee Break & Posters Session

Session 3: How to Evaluate Glycation & Glycated-End Products in Health & Diseases?

11h00 Detection of AGEs as markers for carbohydrate metabolism and protein denaturation

Ryoji Nagai, Tokai University, Kumamoto, Japan

11h30 Glycation of lens proteins in diabetes & its non-invasive assessment

Jan Škrha, Charles University, Prague, Czech Republic

12h00 Skin collagen pentosidine and fluorescence in diabetes are predictors of creatinemia increase and retinopathy progression already 6 years after punch-biopsy

Michel Sternberg, Université René Descartes, Paris, France

12h30 Lunch Break & Posters Session

Session 4: AGEs & RAGEs: Strategies & Innovations

14h00 Delayed intervention with pyridoxamine improves metabolic function and prevents adipose tissue inflammation and insulin resistance

Casper G. Schalkwijk, Maastricht University, Maastricht, The Netherlands

14h30 i-RAGE as a novel carboxymethylad peptide to prevent AGE-induced apoptosis and endoplasmic reticulum stress in vascular smooth muscle cells

Jean-Sébastien Maltais, Sherbrooke University, Québec, Canada

15h00 What do Dietary Maillard Reaction Products and in vivo AGEs have in common? Are they a risk to human health?

Frédéric Tessier, Faculté de Médecine, Université Lille 2, Lille, France

15h30 Coffee Break & Posters Session

16h00 Short oral presentations upon abstracts submission

Immunogenicity of biological macromolecules damage by advanced glycation endproducts (AGEs): A Probable Bio-marker for the Auto-immune Diseases

Saheem Ahmad, Integral University, Lucknow, India

Black radish (*Raphanus sativus* L. var. *niger*): A potential hepatoprotective vegetable in a oxidative stress model

Taekyun Shin, Jeju National University, Korea

Comparison of telomere length and skin auto fluorescence as markers of ageing in COPD

Niki L Reynaert, Maastricht University Medical Center, Netherlands

Characterization of Advanced Glycation end Products by fluorescence and MALDI-TOF/MS in patients with heart failure

Beatriz Paradela-Dobarro, Health Research Institute of Santiago de Compostela, Spain

Physicochemical and biological properties of fish protein hydrolysate-ribose conjugate by Maillard reaction

Kwang-Won Lee, Korea University, Korea

Investigation of the Michael addition between quinones and amines as a possible mechanism for inhibition of Maillard reactions in foods with plant polyphenols: effects in lactose-free ultra-high-temperature processed milk

Marianne N. Lund, University of Copenhagen, Denmark

17h00 Round Table Discussion: AGEs 2016: Between Prevention & Therapeutics

In the presence of Organizers & Speakers from scientific committee

Maillard Reaction Awards 2016

17h30 End of Maillard Reaction 2016