3rd World Congress on Maillard Reaction & Glycation

Targeting Glycation in Health & Diseases

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

Congress Program
Day 1: May 26, 2016

7h30 Opening of Registration – Welcoming of attendees

8h30 Introduction Remarks by Chairpersons
Prof. Ladislas 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 Vizy, Past President of Hungarian Academy of Sciences, Budapest, Hungary

9h00 Science in Hungary & Hungary in Science
Istvan Hargittai, Budapest University of Technology and Economics, Budapest, Hungary

Session 1: Recent Scientific Advances & Directions
Chaired by E. Boulanger, M. Edeas & L. Robert

9h30 Introductory lecture: the history of redox biology, from "reduktones" of Hans von Euler to free radicals, exemplified by the Maillard Reaction and the elastin receptor, their role in atherogenesis
Ladislas Robert & Jacqueline Labat-Robert, Hôtel Dieu, Paris, France

10h15 Coffee Break & Posters Session

10h45 Oxidative stress, glycation & redox 2016: Questions, controversies & perspectives in health and diseases
Marvin Edeas, Chairman of ISANH, Paris, France

11h15 Extracellular matrix glycation, redox status and cross-linking
Sylvie Ricard-Blum, Université Lyon 1, Lyon France

11h40 Poly (ADP-ribose) signalization in oxidative stress
Laszlo Virag, University of Debrecen, Debrecen, Hungary

12h05 Concepts and misconcepts regarding the nature of oxygen free-radicals in the living systems
Imre Zs Nagy, University of Debrecen, Debrecen, Hungary

12h30 Short oral presentations upon abstracts submission (7 minutes + 3 minutes for questions)

Glycated human albumin triggers mitochondrial metabolism of preadipocyte cells
Philippe Rondeau, UMR Diabète Athérombose Thérapies Réunion Océan Indien (DéTROI), France

Nitric oxide metabolites and dinitrosyl iron complexes in the non-enzymatic glycation reactions
Alexey Topunov, Bach Institute of Biochemistry, Research Center of Biotechnology of the Russian Academy of Sciences, Russia

12h50 Lunch Break & Posters Session
Session 2: Maillard Reaction in Pathologies & Diseases

Chaired by R. Nagaraj, S. Ricard-Blum & I. Zs Nagy

14h15 AGE-RAGE interaction in fibrosis of the eye lens
Ram Nagaraj, University of Colorado School of Medicine, Colorado, USA

14h40 Microbiota & Maillard Reaction: Metabolization of Maillard reaction products by the human colonic microbiota
Michael Hellwig, Technische Universität, Dresden, Germany

15h05 AGE-RAGE axis: implication in fibrosis and aging
Eric Boulanger, INSERM-Lille2, Lille, France

15h30 Effect of AGE intake on inflammation and ageing: state of sciences and perspectives
Ivan Bautmans, Vrije Universiteit, Brussels, Belgium

15h55 Coffee Break & Posters Session

16h25 Supra-additive impact of mitochondrial dysfunction and subsequent oxidative stress in central nervous system pathology
Beata Sperlagh, Hungarian Academy of Sciences, Hungary

16h50 Short oral presentations upon abstracts submission (7 minutes + 3 minutes for questions)
AGE accumulation contributes to synaptic dysfunction
Shirley ShiDu Yan, University of Kansas, USA

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 dicarboxyls
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

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

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

18h40 End of first day

20h00 Speakers & attendees together dinner
To participate in the dinner, please register online.

Day 2: May 27, 2016

www.glycation-site.com
8h00  Introduction of the second day
      
      Chaired by M. Stenberg & F. Tessier

8h00  Exercise and brain function: is it redox regulated?
      Zsolt Radak, University of Physical Education, Budapest, Hungary

8h25  The role of hemoglobin derived heme in the pathogenesis of vascular disorders
      György Balla, University of Debrecen, Debrecen, Hungary

Session 3: Maillard Reaction, Glycation & Food

8h50  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

9h15  Diet-induced accumulation of AGEs contribute to metabolic diseases onset by interfering with SREBP-1c activity
      Raffaella Mastrococla, University of Turin, Turin, Italy

9h40  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 Lund, University of Copenhagen, Denmark

9h50  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

10h00 Studies on relationship between total phanolics and rutin contents, antioxidant capacity, fermentation process and the formation of AGES in buckwheat-based ginger cakes
      Małgorzata Przygodzka, Institute of Animal Reproduction and Food Research, Poland

10h10  Amadoriase engineered enzyme for protein deglycation
       Federica Rigoldi, Politecnico di Milano, Italy

10h20 Coffee Break & Posters Session

Session 4: How to Evaluate Glycation & Glycated-End Products in Health & Diseases?

10h50 Detection of AGES as markers for carbohydrate metabolism and protein denaturation
      Ryoji Nagai, Tokai University, Kumamoto, Japan

11h15 Glycation of lens proteins in diabetes & its non-invasive assessment
      Jan Škra, Charles University, Prague, Czech Republic

11h40 Skin collagen pentosidine and fluorescence in diabetes are predictors of creatininemia increase and retinopathy progression already 6 years after punch-biopsy
      Michel Sternberg, Université René Descartes, Paris, France

Session 5: AGES & RAGEs: Strategies & Innovations

12h05 Delayed intervention with pyridoxamine improves metabolic function and prevents adipose tissue inflammation and insulin resistance
      Casper Schalkwijk, Maastricht University, Maastricht, The Netherlands

12h30 Lunch Break & Posters Session
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

Short oral presentations upon abstracts submission (7 minutes + 3 minutes for questions)

AGEs and bone fracture
Deepak Vashisth, Rensselaer Polytechnic Institute, USA

Physicochemical and biological properties of fish protein hydrolysate-ribose conjugate by Maillard reaction
Kwang-Won Lee, Korea University, Korea

Glycation of plant proteins during environmental stress and ageing: methodological approaches, potential mechanisms and biological role
Andrej Frolov, Leibniz-Institute of Plant Biochemistry, Germany

Identification of the Schiff base intermediate in the Glucose/Asparagine reaction by coupled HPLC-FTIR spectroscopy
Constantinos Varotsis, Cyprus University of Technology, Cyprus

Antioxidant properties of heterocyclic Maillard reaction intermediates
Clemens Kanzler, Berlin Institute of Technology, Germany

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

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

15h05 Coffee Break & Posters Session

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 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

Discussion & conclusion

Discussion about the publication of the proceedings of Maillard Reaction 2016 in Journal of ISANH

Maillard Reaction Awards 2016

End of Maillard Reaction 2016