

Title of conference: 14th IMARS virtual conference (IMARS-14) Doha 2021 - Protein glycation in food, health and disease.

Date: 20th – 24th September 2021

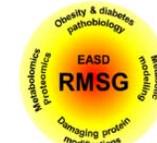
20th September 2021. Day 1.



CONFERENCE AGENDA

Time	Speaker name	Speaker topic
	OPENING CEREMONY	
16-00	Reading from the Qur'an	
16-05	Welcome and opening remarks by President of IMARS, Prof Paul J Thornalley (QBRI/HBKU) and Chair IMARS-14 Organizing Committee, Prof Naila Rabbani (Qatar University)	
16-20	Welcome by our sponsors, Qatar National Research Fund (QNRF) Dr Fatemeh Darakhshan (Program Manager, Biomedical Science & Health, QNRF)	
16-30	Prof Paul J Thornalley (QBRI/HBKU) Doha Glycation Declaration 2021- Grand challenges in glycation research Invitation for input	
Session 1	Breakthrough research: Unfolded protein response	
	Moderators: Prof Naila Rabbani (Qatar University, Qatar) and Prof Paul J Thornalley (QBRI/HBKU)	
16-45	Keynote Speaker: Prof Kazutoshi Mori, Lasker laureate (Kyoto University, Japan)	Dynamics of function and regulation of the endoplasmic reticulum
Session 2	Diabetes and diabetic complications	
	Moderators: Prof Naila Rabbani (Qatar University, Qatar) and Prof Shahrads Taheri (Weill-Cornell College of Medicine-Qatar & Hamad Medical Corporation, Qatar)	
17-30	Prof Abdul-Badi Abou-Samra (Metabolic Research Institute, Hamad Medical Corporation, Qatar)	Qatar Diabetes Prevention Program (QDPP) – use of A1C in diabetes prevention and control
18-00	Prof Mark Cooper (Monash University, Australia)	Transactivation of the Receptor for Advanced Glycation Endproducts mediating pro-inflammatory signaling in diabetes
18-30	Prof Rayaz Malik (Weill-Cornell Medical College, Qatar)	Glycation and diabetic neuropathy
19-00	Prof Ann Marie Schmidt (New York University, USA)	RAGE/DIAPH1: Molecular Mechanisms and Therapeutic Strategies in Obesity and Diabetic Complications
19-30	Assoc Prof Melinda Coughlan (Monash University, Australia)	Targeting the gut to reduce AGE-mediated damage in diabetes
20-00	Day 1 - Close	

CONFERENCE AGENDA



21st September 2021. Day 2

Time	Speaker name	Speaker topic
15-00 – 16-00	Pre-session on-line poster discussion session 1 (Posters 1 – 22)	
Session 3 Glycation in food: innovation for a healthy diet		
Moderators: Prof Hiba Bawadi (Qatar University, Qatar) & Prof Monika Pischetsrieder (University of Erlangen-Nuremberg, Germany)		
16-00	Prof Vincenzo Fogliano (<i>University of Wageningen, The Netherlands</i>)	Glycation and development of healthier foods
16-30	Prof Thomas Henle (<i>Technical University of Dresden, Germany</i>)	Dietary exposure to glycation adducts in food, including health benefits of Manuka honey
17-00	Prof Fred Tessier (<i>University of Lille, France</i>)	Metabolic transit of glycation adducts in food and physiological effects
Short talks		
17-30	Dr Gosia Teodorowicz (<i>University of Wageningen, The Netherlands</i>)	Immunogenicity and allergenicity of glycated cows' milk proteins
17-40	Dr Clemens Kanzler (<i>Technische Universität Berlin, Germany</i>)	Structure of melanoidins formed in the Maillard reaction of methylglyoxal with L-alanine or L-lysine
17-50	Ruth Fabiola Peña-Correa (<i>University of Wageningen, The Netherlands</i>)	Fluidized bed roasting drives Maillard reactions toward A more aromatic cocoa
Session 4 Dicarbonyl stress in obesity and diabetes (with EASD Reactive Metabolites Study Group)		
Moderators: Prof Reiko Inagi (University of Tokyo, Japan) and Prof Vincent Monnier (Case Western Reserve University, USA)		
18-00	Prof Casper G. Schalkwijk (<i>Maastricht University, The Netherlands</i>)	Methylglyoxal stress in obesity and (risk of) type 2 diabetes
18-30	Prof Jacob Haus (<i>University of Michigan, USA</i>)	Dicarbonyl stress in insulin resistance and effects of exercise interventions
19-00	Prof Bernd Stratmann (<i>Ruhr-University Bochum, Germany</i>)	Dicarbonyl stress in diabetic vascular disease
Short talks		
19-30	Dr Kim Maasen (<i>Maastricht University, The Netherlands</i>)	Higher habitual intake of dietary dicarbonyls is associated with higher concentrations of corresponding plasma dicarbonyls and with skin autofluorescence: the Maastricht Study
19-40	Prof Naila Rabbani (Qatar University, Qatar)	Dynamics of hexokinase-2 linked glycolytic overload driving dicarbonyl stress and endothelial cell dysfunction in high glucose concentration <i>in vitro</i>
19-50	Dr Mathias Van den Eynde (<i>Maastricht University, The Netherlands</i>)	Pyridoxamine reduces glycation and markers of endothelial function in a placebo-controlled intervention trial with abdominally obese individuals
20-00	Day 2 – Plenary session close	
20-00 – 20-30	Virtual Trade Exhibition (Exhibitors available on-line for inquiries and discussion)	

CONFERENCE AGENDA

22nd September 2021. Day 3.



Time	Speaker name	Speaker topic
15-00 – 16-00	Pre-session on-line poster discussion session 2 (Posters 23 – 44)	
Session 5	Glycation in through the life course – from maternal bonding to aging	
	Moderators: Prof Ann Marie Schmidt (New York University, USA) and Assoc Prof Melinda Coughlan (Monash University, Australia)	
16-00	Prof Yasuhiko Yamamoto (<i>Kanazawa University, Japan</i>)	RAGE and maternal bonding – an expected mechanism relationship
16-30	Prof Vincent Monnier (<i>Case Western Reserve University, USA</i>)	Ascorbic acid as a glycating agent in the aging lens
17-00	Prof Allen Taylor (<i>Tufts University, USA</i>)	Glyoxalase 1 activity declines with age in many tissues
Short talks		
17-30	Selena Le Bagge (<i>University of Queensland, Australia</i>)	Short term intraperitoneal administration of mammalian cell derived human soluble receptor for advanced glycation end products (sRAGE) prevents type 1 diabetes onset in mice
17-40	Dr Michael Howsam (<i>University of Lille, France</i>)	High hydrostatic pressure processing of human milk avoids the formation of Maillard reaction products and preserves oligosaccharides
17-50	Armand Linkens (<i>Maastricht University, The Netherlands</i>)	Effect of a 4-week diet low and high in AGEs on insulin sensitivity and secretion, vascular function, and markers of low-grade inflammation and endothelial dysfunction of abdominally obese individuals – preliminary results from the deAGEing trial
Session 6	Glycation in plants – physiology, function and food security. Glycation in the COVID-19 response	
	Moderators: Dr Talaat Youssef (Environmental Science Center, Qatar University, Qatar) and Prof Vincenzo Fogliano (University of Wageningen, The Netherlands)	
Glycation in plants – physiology, function and food security		
18-00	Prof Chikahiro Miyake (Kobe University, Japan)	Production mechanism of methylglyoxal and its reactivity with oxygen to produce reactive oxygen species in illuminated chloroplasts of plant leaves
18-30	Prof Andrej Frolov (<i>St. Petersburg State University, Russia</i> & <i>Leibnitz Institute of Plant Biochemistry, Halle, Germany</i>)	Glycation of plant proteins – a step forward to understanding the biological role

CONFERENCE AGENDA

22nd September 2021. Day 3 (cont'd)



Time	Speaker name	Speaker topic
Session 6 Glycation in plants – physiology, function and food security. Glycation in the COVID-19 response (cont'd)		
Glycation in plants – physiology, function and food security (cont'd)		
19-00	Prof Sneh L. Singla-Pareek (<i>International Centre for Genetic Engineering and Biotechnology, India</i>)	Glyoxalases: the antidote for methylglyoxal and plant stress
Short talks		
19-30	Dr Alena Soboleva (<i>St. Petersburg State University, Russia & Leibnitz Institute of Plant Biochemistry, Halle, Germany</i>)	Drought-related changes in pea root nodule metabolome
Glycation in the COVID-19 response		
19-40	Dr Hebah Al Khatib (<i>Qatar University, Qatar</i>)	Evaluation of MG antiviral activity against SARS-CoV-2
19-50	Prof Paul J Thornalley (<i>QBRI/HBKU, Qatar</i>)	Anti-inflammatory activity of glyoxalase-1 inducer, <i>trans</i> -resveratrol and hesperetin, in human small airway epithelial cell primary cultures support application for prevention of COVID-19.
20-00		Day 3 - Close
20-00 – 20-30	Virtual Trade Exhibition (Exhibitors available on-line for inquiries and discussion)	



CONFERENCE AGENDA

23rd September 2021. Day 4.

Time	Speaker name	Speaker topic
15-00 – 16-00	Pre-session on-line poster discussion session 3 (Posters 45 – 67)	
Session 7		
Glycation analytics and chemistry		
Moderators: Prof Fred Tessier (University of Lille, France) and Prof Thomas Henle (Technical University of Dresden, Germany)		
16-00	Prof Monika Pischetsrieder (University of Erlangen-Nuremberg, Germany)	Detection of reactive carbonyl intermediates of glycation
16-30	Prof Ryoji Nagai (Tokai University, Japan)	Measurement of AGEs using LC-MS/MS, immunoassay and skin autofluorescence
17-00	Prof Varoujan Yaylayan (McGill University, Canada)	Mechanochemistry: Maillard Reaction “Through the Looking Glass”
Short talks		
17-30	Prof Marcus Glomb (Martin-Luther University of Halle, Germany)	Update to the N ₆ -carboxymethyl lysine story
17-40	Prof Michael Hellwig (Technical University Braunschweig & Technical University Dresden, Germany)	Enzymatic decarboxylation of N _ε -carboxymethyl-lysine by ornithine decarboxylases reveals underground metabolism as a route for in vivo processing of glycated amino acids
17-50	Dr Alberto Fiore (University of Abertay, United Kingdom)	Polyphenols as trapping agents of reactive carbonyl species: new strategy to reduce harmful compounds in e-cigarette emissions
Session 8		
Glycation in kidney disease, cancer and mental health		
Moderators: Dr Mariam Al-Muftah (QBRI/HBKU) and Prof Casper G. Schalkwijk (Maastricht University, The Netherlands)		
18-00	Prof Reiko Inagi (University of Tokyo, Japan)	Organelle stress and metabolic derangement in kidney disease
18-30	Prof Matthew Vander Heiden (MIT, USA)	Methylglyoxal metabolism is a targetable liability of glycolytic metabolism in cancer
19-00	Prof Makoto Arai (University of Tokyo, Japan)	Glycation and mental health: schizophrenia
Short talks		
19-30	Prof Paul J Beisswenger (Dartmouth University, USA)	Multiple outcome studies confirm predictive value of AGEs for diabetic kidney disease
19-40	Dr Muhanad Alhujaily (Bisha University, Kingdom of Saudi Arabia)	The spliceosome is a target for glycation in methylglyoxal-induced apoptosis and is shielded by glyoxalase 1 in multidrug resistance-linked cancer chemotherapy.
19-50	Leigh Donnellan (University of South Australia, Australia)	Methylglyoxal targets proteins involved in mitotic fidelity
20-00	Day 4 - Close	
20-00 – 20-30	Virtual Trade Exhibition (Exhibitors available on-line for inquiries and discussion)	



CONFERENCE AGENDA

24th September 2021. Day 5.

Time	Speaker name	Speaker topic
Session 9 Imaging, diagnostic algorithms and therapeutics		
Moderators: Prof Ryoji Nagai (Tokai University, Japan) and Prof Bernd Stratmann (University of the Ruhr-Bochum, Germany)		
16-00	Prof Chunyong Ding (Shanghai Jiaotong University, China)	Design and synthesis of near-infrared fluorescent probe targeting tumour metabolite methylglyoxal for visualization study
16-30	Prof Naila Rabbani (Qatar University, Qatar)	Glycation and machine learning – diagnostic algorithms for diabetes, arthritis and autism
17-00	Prof Paul J Thornalley (QBRI/HBKU, Qatar)	Glycation based therapeutics: Glo1 inducers and Glo1 inhibitors. COVID-19 repurposing
Session 10 Methods and models in glycation research – Qatar glycation collaboration		
Moderators: Prof Naila Rabbani (Qatar University, Qatar) and Prof Paul J Thornalley (QBRI/HBKU)		
17-30	Dr Sowndramalingam Sankaralingam (Qatar University, Qatar)	Measurement of glyoxalase activities
17-45	Maryam Al-Motawa (QBRI/HBKU, Qatar)	Genetics of glycation - glycated hemoglobin, GLO1 single nucleotide polymorphisms and copy number variation
18-00	Prof Paul J Thornalley (QBRI/HBKU, Qatar)	Assay of glyoxalase metabolites: methylglyoxal, S-D-lactoylglutathione and D-lactate
18-15	Prof Naila Rabbani (Qatar University, Qatar)	Quantitation of glycation adducts by stable isotopic dilution analysis LC-MS/MS
18-30	Dr Patrick Wijten (QBRI/HBKU, Qatar)	Proteomics of glycation
18-45	Dr Mingzhan Xue (QBRI/HBKU, Qatar)	Application of functional genomics in studies of dicarbonyl stress
19-00	Dr Alberto da la Fuente (QBRI/HBKU, Qatar)	Mathematical modelling of dicarbonyl stress
19-15	Dr Hebah Al Khatib (Qatar University, Qatar)	Glycation in drug repurposing for COVID-19
19-30	Dr Essam Abdelalim (QBRI/HBKU, Qatar)	Inducible pluripotent stem cells (iPSCs) application in diabetes and glycation research
FINALE AND CLOSE		
19-45	Prof Paul J Thornalley (IMARS President, QBRI/HBKU, Qatar)	<ul style="list-style-type: none"> • Prize awards for best presentations • Grand challenges in glycation research – Doha Glycation Declaration 2021 • IMARS – Change of President
20-00	Day 5 - Conference Close	