

Tuesday, June 4, 2024

**Satellite Symposium I “Metabolic and Inflammatory Diseases: Pathophysiology and Therapy”
(Üsküdar University Istanbul)**

09:15 – 09:30	Opening and Rectors Welcome
09:30 – 10:20	<p>Plenary Lecture <i>Chairs: Nesrin Kartal Özer (Üsküdar University, Istanbul, Türkiye) and Nevzat Tarhan (Üsküdar University, Istanbul, Türkiye)</i> Christos S. Mantzoros (Harvard Medical School, Boston, MA, USA) Fatty liver disease: advancing the understanding of underlying mechanisms, diagnostic approach and therapeutic strategies</p>
10:20 – 10:30	Coffee Break
10:30 – 11:00	<p>Lectures - Part I <i>Chairs: Muhsin Konuk (Üsküdar University, Istanbul, Türkiye) and Kemal Yelekci (Kadir Has University, Istanbul, Türkiye)</i> Antonio Cuadrado (Autonomous University of Madrid, Madrid, Spain) Therapeutic targeting the NRF2/beta-TrCP complex in metabolic-associated fatty liver disease (MAFLD)</p>
11:00 – 11:30	<p>Adil Mardinoglu (Royal Institute of Technology, Stockholm, Sweden and King's College London, London, UK) The use of systems biology in treatment of metabolic diseases</p>
11:30 – 12:00	<p>Alexander Bartelt (Ludwig-Maximilians-Universität München, Munich, Germany) Adipocyte inflammation and cardiometabolic disease</p>
12:00 – 13:00	Lunch Break
13:00 – 13:30	<p>Lectures - Part II <i>Chairs: Haydar Sur (Üsküdar University, Istanbul, Türkiye) and Ayfer Yalcin (Ege University, Izmir, Türkiye)</i> Yuji Naito (Kyoto Prefectural University of Medicine, Kyoto, Japan) D-alanine, a metabolite of gut microbiota, inhibits intestinal inflammation by suppressing the activation of macrophage</p>
13:30 – 14:00	<p>Young-Joon Surh (Seoul National University, Seoul, South Korea) Protective effects of some COX-2-derived bioactive lipid mediators on experimentally induced colitis and intestinal carcinogenesis</p>
14:00 – 14:30	<p>Erdi Sözen (Marmara University, Istanbul, Türkiye) Long chain metabolites of vitamin E and their potential in inflammation resolution</p>
14:30 – 15:00	Coffee break
	<p>Young Investigator Presentations <i>Chair: Tugce Demirel-Yalciner (Üsküdar University, Istanbul, Türkiye) and Nilgün Tekkeşin (Üsküdar University, Istanbul Türkiye)</i></p>

15:00 – 15:15	Seyed Mohammad Miri (<i>Istanbul Medipol University, Istanbul, Türkiye</i>) Revisiting the role of H₂O₂ in Nrf2 activation using an oxygen-independent biosensor
15:15 – 15:30	Bengü Cetinkaya (<i>Marmara University, Istanbul, Türkiye</i>) Garcinoic acid and α-13'-COOH mediated modulation of erastin-induced ferroptosis through NRF2/HO-1 signaling in hepatocytes
15:30 – 15:45	Gizem Damla Yalcin (<i>Middle East Technical University, Ankara, Türkiye</i>) Characterization of evolutionary dynamics for drug resistance in a 3D cell culture system using cellular barcoding technology
15:45 – 16:00	Anna Migni (<i>University of Perugia, Perugia, Italy</i>) Advanced lipidomics strategies to explore hepatic lipotoxicity and its treatment
16:00 – 16:15	Berranur Sert (<i>Üsküdar University, Istanbul, Türkiye</i>) MESSAGE Mission: Understanding the immune system and cancer connection in microgravity
16:15 – 16:30	Naz Mina Mert (<i>Kadir Has University, Istanbul, Türkiye</i>) In <i>Silico</i> screening of novel-potential inhibitor of methionine aminopeptidase 2 for the treatment of cancer
16:30 – 17:00	Closing Ceremony

Wednesday, June 5, 2024

Annual Meeting of SFRR-Europe “From Molecules to Tissues: Redox Biology in Action”
(Mövenpick Asia Hotel Istanbul)

07:30 – 09:00	Registration I Poster and Exhibition Set-Up	
09:00 – 09:30	SFRR-E Annual Meeting Opening (Hall 1+2)	
09:30 – 10:00	<p>SFRR-E Annual Award Lecture (Hall 1+2) <i>Chairs: Daniela Caporossi (University of Rome "Foro Italico", Rome, Italy) and Juan Sastre (University of Valencia, Valencia, Spain)</i></p> <p>Ana Maria Cuervo (Albert Einstein College of Medicine, New York, NY, USA) Selective autophagy in the fight against aging and age-related diseases</p> <p>SFRR-E Basic Science Award Lecture (Sponsored by Elsevier) (Hall 1+2) <i>Chairs: Enrique Cadenas (University of Southern California, Los Angeles, CA, USA) and Giuseppe Valacchi (University of Ferrara, Ferrara, Italy, and North Carolina State University, Raleigh, NC, USA)</i></p>	
10:00 – 10:30	<p>Kelvin J.A. Davies (University of Southern California, Los Angeles, CA, USA) The redox biology of adaptive homeostasis</p>	
10:30 – 11:00	Coffee break I Poster viewing I Exhibition	
11:00 – 11:30	<p>SFRR-E Symposium I - Cross-Talk between Mitochondria and Nucleus: A Central Node for Cellular Redox Control (Hall 1+2) <i>Chairs: Juan Sastre (University of Valencia, Spain) and Maria Monsalve (CSIC, Madrid, Spain)</i></p> <p>Luca Scorrano (University of Padua, Padua, Italy) ROS and the mitochondrial dynamics protein Opa1: a bidirectional crosstalk</p>	
11:30 – 12:00	<p>Juan P. Bolanos (University of Salamanca, Salamanca, Spain) Linking astrocyte metabolism with ROS signalling</p>	
12:00 – 12:30	<p>Erika Fernandez-Vizarra (University of Padua, Padua, Italy) Cytochrome c oxidase adaptation to oxidative stress is mediated by COA8</p>	
12:30 – 13:30	Lunch Break I Poster Viewing I Exhibition	Women in Science: Chair: Nesrin Kartal Özer (Üsküdar University, Istanbul, Türkiye) (Dining Hall)
13:30 – 14:00	<p>SFRR-E Clinical Science Award Lecture (Hall 1+2) <i>Chairs: Michael J. Davies (University of Copenhagen, Copenhagen, Denmark) and Giovanni E. Mann (King's College London, London, UK)</i></p> <p>Thomas Michel (Harvard Medical School, Brigham and Women's Hospital, Boston, MA, USA) Novel chemogenetic/transgenic models of tissue-specific oxidative stress</p>	

SFRR-E Symposium II – KEAP1 and NRF2: Key Targets for Maintenance of Redox Homeostasis in Health and Disease (Hall 1+2)

Chairs: Emrah Eroglu (Istanbul Medipol University, Istanbul, Türkiye) and Giovanni Mann (King's College London, London, UK)

14:00 – 14:30

Albena Dinkova-Kostova (University of Dundee School of Medicine, Dundee, UK)

Electrophiles and KEAP1-NRF2 protein-protein interaction inhibitors for prevention and treatment of chronic disease

14:30 – 15:00

Ana Isabel Rojo (Autonomous University of Madrid, Spain)

Therapeutic targeting of NRF2 and KEAP1 in Alzheimer's disease

15:00 – 15:30

Young-Joon Surh (Seoul National University, Seoul, South Korea)

Role of NRF2 in protective effects of the electrophilic metabolite of docosahexaenoic acid against oxidative cell death and inflammation

Keynote Lecture (Hall 1+2)

Chairs: Nesrin Kartal Özer (Üsküdar University, Istanbul, Türkiye) and Malcolm Jackson (University of Liverpool, Liverpool, UK)

15:30 – 16:00

Christos S. Mantzoros (Harvard Medical School, Boston, MA, USA)

Metabolic dysfunction associated steatohepatitis (MASH): Underlying mechanisms and diagnostic and therapeutic advances

Session – Redox Control as New Targets for the Clinic (Hall 1+2)

Chairs: Nesrin Kartal Özer (Üsküdar University, Istanbul, Türkiye) and Malcolm Jackson (University of Liverpool, Liverpool, UK)

16:00 – 16:15

Yuji Naito (Kyoto Prefectural University of Medicine, Kyoto, Japan)

Gut frailty: its concept and the role of dietary fibre

16:15 – 16:30

Alexander Bartelt (Ludwig-Maximilians-Universität München, Munich, Germany)

Ubiquitin-proteasome system in the defence against lipid ROS and ferroptosis

16:30 – 18:00

Guided Poster Presentations I, 6 Parallel groups, Coffee & Refreshments

Group A: Redox in Inflammation and Immunity

Chairs: Clare Hawkins (University of Copenhagen, Copenhagen, Denmark) and Konstantinos Papanikolaou (University of Thessaly, Trikala, Greece)

PP I_A01_ Role of mitochondrial sodium calcium exchanger (NCLX) in NLRP3 inflammasome activation by redox signal Javier

Prieto-Martinez, Paloma Narros, Cristóbal De Los Rios-Salgado, Javier Egea, and Antonio Martinez-Ruiz (Hospital Santa Cristina, Instituto de Investigación Sanitaria Princesa (IIS-IP), Madrid, Spain)

PP I_A02_ Artemisinin induces lipid peroxidation in Plasmodium falciparum-infected erythrocytes in concentration- and malaria parasite stage-dependent manner

Oleksii Skorokhod, Elena Valente, Giorgia Mandili, Daniela Ulliers, and Evelin Schwarzer (University of Turin, Turin, Italy)

PP I_A03_ Utility of selenocyanate to modulate cellular damage induced by myeloperoxidase during chronic inflammation

Els Hartsema, Randi Alsbjerg, and Clare Hawkins (University of Copenhagen, Copenhagen, Denmark)

PP I_A04_ The diagnosis potential of miRNAs in sepsis and their relation to oxidative stress

Irene Cánovas-Cervera, Elena Nacher-Sendra, Enric Dolz-Andrés, María Rodríguez-Gimillo, Carolina Ferrando, Nieves Carbonell, Salvador Mena-Mollá, Federico V. Pallardó, and José Luis García-Giménez (*University of Valencia and INCLIVA Health Research Institute, Valencia, Spain*)

PP I_A05_Changes of unconjugated bilirubin levels and DNA damage in hospitalised middle-aged COVID-19 patients

Agnes Draxler, Jessica Binar, Michael Haslacher, Laura Bragagna, Lina Maqboul, Brenda Laky, Rainer Thell, and Karl-Heinz Wagner (*University of Vienna, Austria*)

PP I_A06_ Investigating Garcinoic Acid-Regulated Anti-Inflammatory Effect on Bone-Marrow Derived Macrophages

Ibrahim Isot, Erdi Sozen, Seong Hoon Kim, Young-Joon Surh, and Nesrin Kartal Özer (*Marmara University, Istanbul, Türkiye*)

PP I_A07_ Establishing an oxysterol signature in neutrophils following initiation of oxidative burst

Heather M. Chick, Meg Chambers, Yuqin Wang, William J. Griffiths, Peter Olofsson-Sahl, Pontus Dunér, and Helen R. Griffiths (*Swansea University Medical School, Singleton Campus, Swansea University, UK*)

PP I_A08_ Cooperative induction of CXCL chemokines by low concentrations of inflammatory cytokines and oxidized phospholipids

Alma Hodzic, Bernd Gesslbauer, Valery Bochkov, and **Olga Oskolkova** (*University of Graz, Graz, Austria*)

PP I_A09_ Modulation of pro-inflammatory gene transcription by electrophiles

Olga Oskolkova, Alma Hodzic, Bernd Gesslbauer, Teresa Pirker, Rudolf Bauer, and **Valery Bochkov** (*University of Graz, Graz, Austria*)

PP I_A10_ Novel ROS inducing compounds influence CD4+ T cell activation

Megan Chambers, Alihussein HK Remtulla, Irundika K Dias, Heather Chick, Pontus Dunér, Peter Olofsson, Markus H Hoffman, Malin Hultqvist, and Helen R Griffiths (*Swansea University, Swansea, UK*)

PP I_A11_ Glutathione peroxidase is critical for survival and virulence in Pseudomonas aeruginosa PA14

Jadye Cordeiro, Thiago Macêdo Lopes Correia, Caio Oliveira Lopes de Magalhães, Railmara Pereira da Silva, Talita Costa dos Santos, Laura Lima Turani, Leonardo Silva Rocha, Tássia Liz Araújo dos Santos Lessa, Regiane Yatsuda, Amélia Cristina Mendes de Magalhães Gusmão, Robson Amaro Augusto da Silva, Flávia Carla Meotti, and **Raphael Ferreira Queiroz** (*Universidade Estadual do Sudoeste da Bahia, Vitória da Conquista, Brazil*)

PP I_A12_ Glutathione S-transferase P1-1 induction influences the cellular proteostasis and apoptotic response to uremic proteins in peripheral blood leukocytes

Desirée Bartolini, Maria Antonietta Grignano, Anna Migni, Ina Varfaj, Anna Maria Stabile, Mario Rende, Roccoaldo Sardella, Carmelo Libetta, and Francesco Galli (*University of Perugia, Perugia, Italy*)

Group B: Redox in Cellular Mechanisms

Chairs: Juan Sastre (University of Valencia, Valencia, Spain) and Cristina Mas-Bargues (University of Valencia, Valencia, Spain)

PP I_B13_ Effects of the dipeptide of active site CXXC motif on mitochondrial Erv1/ALR activity

Xiaofan Tang, **Hui Lu** (*School of Biological Sciences, University of Manchester, Manchester, UK*)

PP I_B14_ Competitive oxidation of enzymes of the pentose phosphate pathway, mediated by peroxy radicals, affects functionality of the pathway to produce NADPH

Juan Sebastián Reyes, Javiera Cortés-Ríos, Eduardo Fuentes-Lemus, María Rodríguez-Fernández, Michael J. Davies, and **Camilo López-Alarcón** (*Pontificia Universidad Católica de Chile, Chile*)

PP I_B15_ Formation of di-tryptophan dimers by radical-radical reactions

Marcela Morales, Juan David Figueroa, Daniel Villegas, Eduardo Fuentes-Lemus, Michael J. Davies, and **Camilo López-Alarcón** (*Pontificia Universidad Católica de Chile, Chile*)

PP I_B16_ The response of the vimentin network to oxidants and electrophiles is modulated by pH

Alma E. Martínez, Patricia González-Jiménez, Cristina Vidal-Verdú, María A. Pajares, and **Dolores Pérez-Sala** (*Centro de Investigaciones Biológicas Margarita Salas, C.S.I.C., Madrid, Spain*)

PP I_B17_ Unveiling cellular defense: MAPK15 enhances cellular mitophagy and NRF2-mediated antioxidant responses

Lorenzo Franci, Giulia Vallini, Giovanni Inzalaco, Virginia Barone, and Mario Chiariello (*Consiglio Nazionale delle Ricerche, CNR, and Istituto per lo Studio, la Prevenzione e la Rete Oncologica, ISPRO, Siena, Italy*)

PP I_B18_ The NADPH oxidase DUOX2 alters cell migration and wound healing dynamics

Maurice O'Mara, Suisheng Zhang, and Ulla G. Knaus (*University College Dublin, Dublin, Ireland*)

PP I_B19_ Type III intermediate filaments as novel CoAlation targets

Nuria Goya-Iglesias, Bess Y. K. Yu, Ivan Gou, and **Dolores Pérez-Sala** (*Centro de Investigaciones Biológicas Margarita Salas, C.S.I.C., Madrid, Spain*)

PP I_B20_ Lon protease knockdown induces mitochondrial DNA damage and dysfunction

Marie-Paule Hamon and Bertrand Friguet (*Sorbonne Université, CNRS, INSERM, Paris, France*)

PP I_B21_ AKR1A1 drives metabolic reprogramming and redox adaptive response

Chiara Pecorari, Salvatore Rizza, Simone Cardaci, Yongluon Luo, Thomas Sauter, and Giuseppe Filomeni (*Danish Cancer Institute, Copenhagen, Denmark*)

PP I_B22_ FSH stimulates free radical generation in human ovarian follicle

Nuan Lin, Naomi Hofsink, Koen van Zomeren, Teelkien van Veen, Xiaoling Zhou, Torsten Plosch, Uwe J. F. Tietge, Henk Groen, Astrid Cantineau, Romana Schirhagl, and Annemieke Hoek (*University Medical Center Groningen, Groningen, The Netherlands, and Shantou University Medical College, Shantou, China*)

PP I_B23_ Selenocysteine variant of human Peroxiredoxin 2 is more active than the wild type enzyme

Attila Andor, Zsuzsanna Anna Pató, Mahendrarvarman Mohanraj, Beáta Biri-Kovács, Attila Kolonics, Qing Cheng, and Elias S. J. Arnér (*National Institute of Oncology, Budapest, Hungary, and Karolinska Institutet, Stockholm, Sweden*)

PP I_B24_ Antioxidant response of human induced pluripotent stem cells and their differentiated descendants to oxidative stress

Nikita Guriev, Julia Ivanova, Natalia Pugovkina, and Olga Lyublinskaya (*Institute of Cytology RAS, St. Petersburg, Russia*)

PP I_B25_ Alteration in antioxidant activity during senescence and revitalization of human mesenchymal stem cells.

Julia Ivanova, Nikita Guriev, Natalia Pugovkina, and Olga Lyublinskaya (*Institute of Cytology RAS, St. Petersburg, Russia*)

PP I_B26_Redox, metallomic and lipidomic profiling of mouse brain following ischemia-reperfusion injury: implications for neurovascular protection

Nathan Siddall, Alexander Morrell, Alex Griffiths, Theodora Stewart, Davide Martella, Paul A. Fraser, and **Giovanni E. Mann** (*King's College London, London, UK*)

Group C: Redox in Environmental Stressors

Chairs: Giuseppe Valacchi (University of Ferrara, Ferrara, Italy, and North Carolina State University, Raleigh, NC, USA) and Katarzyna Goljanek-Whysall (University of Galway, Galway, Ireland)

PP I_C27_The exposome concept for assessment of environmental health risks – role of redox biology and oxidative stress

Andreas Daiber and Thomas Münzel (*University Medical Center of the Johannes Gutenberg-University, and German Center for Cardiovascular Research (DZHK), Mainz, Germany*)

PP I_C28_Impact of noise abandoning after 4 days aircraft noise exposure on blood pressure, cardio- and cerebrovascular function, inflammation and oxidative stress in rodents

Matthias Oelze, Katie Frenis, Marin Kuntic, Dominika Mihalikova, Maria Teresa Bayo Jimenez, Adrian Gericke, Sebastian Steven, Omar Hahad, Huige Li, Andreas Daiber, and Thomas Münzel (*University Medical Center of the Johannes Gutenberg-University, Mainz, Germany*)

PP I_C29_Abatement of aircraft noise-induced vascular disorders by exercise, fasting and pharmacological activation of α 1AMPK or NRF2/HO1 pathway

Matthias Oelze, Miroslava Kvandová, Sanela Rajlic, Paul Stamm, Maria Teresa Bayo Jimenez, Marc Foretz, Benoit Viollet, Hartmut Kleinert, Adrian Gericke, Andreas Daiber, Swenja Kröller-Schön, Thomas Jansen, and Thomas Münzel (*University Medical Center of the Johannes Gutenberg-University Mainz, Mainz, Germany*)

PP I_C30_Marine compound inhibits fine particulate matter-induced reactive oxygen species through histone methylation

Kyoung Ah Kang, Mei Jing Piao, Pincha Devage Sameera Madushan Fernando, Herath Mudiyanse Udari Lakmini Herath, and Jin Won Hyun (*Jeju National University, Jeju, South Korea*)

PP I_C31_Different organ distribution of nano- and micro-sized particulate matter results in different oxidative stress burden – implications for vascular function

Marin Kuntic, David Nußbaum, Ivana Kuntic, Matthias Oelze, Tristan Junglas, Lea Strohm, Henning Ubbens, Maria Teresa Bayo Jimenez, Albrecht Stroh, Dirk Cleppien, Thomas Münzel, and Andreas Daiber (*University Medical Center Mainz and German Center for Cardiovascular Research, DZHK, Mainz, Germany*)

PP I_C32_Evaluation of the air pollution-induced adverse effects reversibility on olfactory bulb

Agustina Freire, Mariana Garcés, Sofía Reynoso, Octavio Diana, Alipio Pinto, Manuela Martinefski, Nahuel Mendez Diodati, Jorge Goldstein, Valeria Tripodi, Bruno Buchholz, Silvia Alvarez, Natalia Magnani, and **Pablo Evelson** (*Universidad de Buenos Aires, Buenos Aires, Argentina*)

PP I_C33_Protection against oxidative DNA damage: Green tea polyphenols in Hsd:ICR mice exposed to hexavalent chromium

María del Carmen García-Rodríguez, Lourdes Montserrat Hernández-Cortes, Alda Rocio Ortiz-Muñiz, and Víctor Manuel Mendoza-Núñez (*Facultad de Estudios Superiores-Zaragoza, UNAM, CDMX, Mexico*)

PP I_C34_ Urban air exposure exacerbates the oxinflammatory response worsening the recovery after an acute lung injury

Sofía Reynoso, Florencia Sarno, Manuela Martinefski, Agustina Freire, Mariana Garcés, Lourdes Cáceres, Laura Caltana, Timoteo Marchini, Valeria Tripodi, **Pablo Evelson**, and Natalia Magnani (*Universidad de Buenos Aires, Buenos Aires, Argentina*)

PP I_C35_ Arsenic induces the C2C12 myotube cell injury by mitochondrial iron-mediated oxidative stress and inflammatory response

Donghyun Kim, and Ok-Nam Bae (*Hanyang University, Ansan, South Korea*)

PP I_C36_ Cadmium increases the permeability of the blood-brain barrier by causing mitochondria dysfunction and iron homeostasis dysregulation

Junkyung Gil, and Ok-Nam Bae (*Hanyang University, Ansan, South Korea*)

PP I_C37_ Comparison of pollutant effects on cutaneous inflammasomes activation.

Francesca Ferrara, John Ivarsson, Andrea Vallese, Anna Guiotto, Sante Colella, Alessandra Pecorelli, and Giuseppe Valacchi (*University of Ferrara, Ferrara, Italy*)

PP I_C38_ First evidence of redox damage by indoor pollution in lung tissue by the use of 2D and 3D models

Mariana Garcés, **Francesca Ferrara**, Andrea Vallese, Mascia Benedusi, Franco Cervellati, Natalia Magnani, Alessandra Pecorelli, Pablo Evelson, and Giuseppe Valacchi (*University of Ferrara, Ferrara, Italy*)

PP I_C39_ Oxidation-reduction potential (ORP) measurements of lysed cells and their relation to radiosensitivity

Patrick Kudis, Daniel García-Calderón, Jeannette Jansen, and Joao Seco (*German Cancer Research Center (DKFZ), and Ruprecht-Karls-University, Heidelberg, Germany*)

PPI_C40_ Heterocellular interactions in metabolic responses to air pollution fine particulate matter (PM_{2.5})

Lourdes Caceres, Sheu-Tijani Olawale Abogunloko, Dennis Wolf, and **Timoteo Marchini** (*University of Freiburg, Freiburg im Breisgau, Germany*)

Group D: Nanoparticles, Biosensors and Novel Approaches in Redox Control

Chairs: Daniela Caporossi (University of Rome "Foro Italico", Rome, Italy) and Eduardo Fuentes-Lemus (University of Copenhagen, Copenhagen, Denmark)

PP I_D41_ ReDisulphID: a structural bioinformatic screen for identifying redox-regulated disulphides

Pierre Coleman, Anna Laddach, Franca Fraternali, and Joseph R Burgoyne (*King's College London, London, UK*)

PP I_D42_ Quantum sensing of free radicals in semen: Investigating the role of oxidative stress in idiopathic male infertility

Hui Ting Li, Jitske Eliveld, Annemieke Hoek, Astrid E.P. Cantineau, and Romana Schirhag (*University Medical Centre Groningen, Groningen, The Netherlands*)

PP I_D43_ HyPer7 biosensor associate with proteomic shifts related to oxidative stress in endothelial cells

Sarah Barakat, Şeyma Çimen, Seyed Mohammad Miri, Emre Vatandaşlar, Kıvanç Kök, Gürkan Öztürk, and Emrah Eroğlu (*Istanbul Medipol University, Istanbul, Türkiye*)

PP I_D44_ Advancing sustainable biofunctional textiles: Exploring the anti-inflammatory, antioxidant, and UV-protection properties in onion (*Allium cepa* L.) skin extract

Ina Varfaj, Desirée Bartolini, Letizia Pallottelli, Anna Migni, Damiano Sgarretta, Antonio Macchiarulo, Aldo Romani, Roccaldo Sardella, Catia Clementi, and Francesco Galli (*University of Perugia, Perugia, Italy*)

PP I_D45_ Revisiting the role of H₂O₂ in Nrf2 activation using an oxygen-independent biosensor

Seyed Mohammad Miri and Emrah Eroğlu (*Istanbul Medipol University, Istanbul, Türkiye*)

PP I_D46_ Development of a non-animal testing method using genetically engineered biosensors for assessing skin sensitizers

Melike Seçilmiş, Ahmet Katı, and Emrah Eroğlu (*Sabancı University and Istanbul Medipol University, Istanbul, Türkiye*)

PP I_D47_ Human 3D full skin models coupled with advanced bio-markers assessment for the efficacy evaluation of topical redox modulators

Andrea Cavagnino, Anaïs Bobier, Arthur Starck, Hilaire Bakala, Bertrand Friguet, and **Martin Baraibar** (*OxiProteomics, Créteil, France*)

PP I_D48_ What do we know about tocomonoenol occurrence and metabolism?

Alexander Montoya-Arroyo and Jan Frank (*University of Hohenheim, Stuttgart, Germany*)

PP I_D49_ Effect of nanoparticle internalization on migration & adhesion activity in human neutrophils: focus on the mitochondria

Veronica Lisi, Nancy Buechler, Erica Burnham, Nathalie Pinkerton, and Sophie Maiocchi (*Wake Forest University School of Medicine, Winston-Salem, NC, USA*)

PP I_D50_ Nanoparticle-mediated delivery of α -13'-COOH to macrophages: assessing *in vitro* potential

Eda İlayda Talaz, Deniz Göl, Seher Meşe, Nesrin Kartal Özer, Özgül Gök, and Ahmet Erdi Sözen (*Marmara University, Istanbul, Türkiye*)

PP I_D51_ A biosensor-based approach for the determination of hydrogen peroxide in biological samples

Ana Ledo, João Laranjinha, and Rui M. Barbosa (*University of Coimbra, Coimbra, Portugal*)

PP I_D52_ Pitfalls in antibody-based detection of Nrf2

Alicja Dziadosz, Sara Mikac, Artur Pirog, Sachin Kote, and **Alicja Sznarkowska** (*University of Gdansk, Poland*)

Group E: Redox in Cardiovascular Diseases I

Chairs: Aphrodite Vasilaki (University of Liverpool, Liverpool, UK) and Nikos Margaritelis (Aristotle University of Thessaloniki, Thessaloniki, Greece)

PP I_E53_ Thioredoxin-1 and its mimetic peptide improve systolic cardiac functions and remodeling in myocardial infarction

Tania Medali, Dominique Couchie, Nathalie Mougnot, Maria Mihoc, Olaf Bergmann, Wouter Derks, Luke Szweda, Bertrand Friguet, and **Mustapha Rouis** (*Sorbonne University, Paris, France*)

PP I_E54_ Thioredoxin-2 protects mice against experimental myocardial infarction

Tania Medali, Dominique Couchie, Nathalie Mougnot, Maria Mihoc, Olaf Bergmann, Wouter Derks, Celio X. Santos, **Bertrand Friguet**, and Mustapha Rouis (*Sorbonne University, Paris, France*)

PP I_E55_ Autophagy activation can partially rescue proteasome dysfunction-mediated cardiac toxicity

Sentiljana Gumeni, Eleni-Dimitra Papanagnou, and **Ioannis P. Trougakos** (*National & Kapodistrian University of Athens, Athens, Greece*)

PP I_E56_ Iodide as a potential therapeutic in atherosclerosis

Kathrine V. Jokumsen, Christina Christoffersen, Michael J. Davies, and Luke F. Gamon (*University of Copenhagen, Copenhagen, Denmark*)

PP I_E57_Nitric oxide, superoxide and peroxynitrite – redox regulation of the cardiovascular system by nitro-oxidative stress and S-nitros(yl)ation

Stefan Schildknecht and **Andreas Daiber** (*University Medical Center of the Johannes Gutenberg-University, and German Center for Cardiovascular Research (DZHK), Mainz, Germany*)

PP I_E58_Allopurinol blocks Cardiac Hypertrophy in a mouse model of Williams-Beuren Syndrome via reducing oxidative stress

Victoria Campuzano, Isaac Rodríguez-Rovira, Marien Palomo-Buitrago, and Gustavo Egea (*University of Barcelona, Barcelona, Spain*)

PP I_E59_A new combinatory pharmacological treatment strategy involving antioxidants to ameliorate aortic aneurysm progression in Marfan syndrome

Isaac Rodríguez-Rovira, Marien Palomo-Buitrago, Victoria Campuzano, and Gustavo Egea (*University of Barcelona, Barcelona, Spain*)

PP I_E60_Human atherosclerotic plaques contain oxidant-modified proteins

Karen C. Yang-Jensen, Helen Hemmling, Lasse G. Lorentzen, Clare L. Hawkins, and Michael J. Davies (*University of Copenhagen, Copenhagen, Denmark*)

PP I_E61_Role of the mitochondrial sodium calcium exchanger, NCLX, in reperfusion injury after stroke

Iciar Polo-Fernandez, Ana Lopez-Rodriguez, Susana Delgado-Martin, Ana Pacheco-Aguado, Javier Egea-Maiquez, and Antonio Martinez-Ruiz (*Fundación Investigación Biomédica Hospital Universitario La Princesa, Madrid, Spain*)

PP I_E62_Dietary nitrate from beetroot juice reduces oxidized LDL, LDL/NOx ratio and LDL concentrations in adults with grade 1 hypertension

Rebeka Fejes, **Agnes Draxler**, Laura Bragagna, Richard J. Woodman, Kevin D. Croft, Catherine P. Bondonno, Jonathan Hodgson, Michael Wolzt, Karl-Heinz Wagner, and Oliver Neubauer (*University of Vienna, Vienna, Austria*)

PP I_E63_Doxorubicin-induced cardiotoxicity – gender differences and a protective role of AMPK

Dominika Mihalikova, Alexander Czarnowski, Matthias Oelze, Henning Ubbens, Lea Strohm, Michael Molitor, Thomas Münzel, Andreas Daiber, and Paul Stamm (*University Medical Center Mainz, Mainz, Germany*)

PP I_E64_Endotoxemia in H9c2 cardiomyocytes: insights into mitochondrial dynamics, bioenergetics and ROS production

Juan S. Adan Arean, Ailen Hvozda Aran, Bruno Pappalettera, Tamara Vico, Pablo Evelson, Virginia Vanasco, and **Silvia Alvarez** (*University of Buenos Aires, Buenos Aires, Argentina*)

Group F: Redox in Cardiovascular Diseases II and Aging

Chairs: Niki Chondrogianni (National Hellenic Research Foundation, Athens, Greece) and Vanesa López (University of Turin, Turin, Italy)

PP I_F65_An anti-proliferative agent in drug-eluting stent, sirolimus, resulted in the promotion of pro-coagulant activity via phosphatidylserine externalization in human erythrocytes

Sungbin Choi and Ok-Nam Bae (*Hanyang University, Ansan, Republic of Korea*)

PP I_F66_Oxidative stress impairs the integrity of isolated cardiomyocytes

Tibor Maske, Jonas Dröge, Alissar Alissa, Cornelius Welke, André Grafe, Marion Müller, Uwe Schlomann, Volker Rudolph, and Anna Klinke (*University Hospital of the Ruhr-Universität Bochum, Bad Oeynhausen, Germany*)

PP I_F67_Targeting mitochondrial biogenesis with nitro-oleic acid has protective effects on murine cardiomyocytes under metabolic stress

Elfi Donhauser, Marion Müller, Torben Schubert, Cornelius Welke, Thomas Patschkowski, Tibor Maske, Volker Rudolph, Uwe Schlomann, and Anna Klinke (*University Hospital of the Ruhr-Universität Bochum, Bad Oeynhausen, Germany*)

PP I_F68_Age- and senescence related changes in the activity of metabolic key enzymes in the epidermis and organotypic skin at single cell level

Christopher Kremslehner, Marie Sophie Narzt, Michaela Schirato, Ionela Mariana Nagelreiter, Gaëlle Gendronneau, Francesca Marcato, Agnès Tessier, Elisabeth Ponweiser, Arvand Haschemi, and **Florian Gruber** (*Medical University of Vienna, Vienna, Austria*)

PP I_F69_A Platanus orientalis extract promotes the anti-senescent role of caveolin-1 via the amelioration of its DNA damage repair function

Christina Christodoulou, **Zozo Outskouni**, Andreas Goutas, Vaios Papadopoulos, Konstantinos Dimas, and Varvara Trachana (*University of Thessaly, Larissa, Greece*)

PP I_F70_The potential of marine-inspired thiol compounds as novel UV-screening agents for sun protection

Alessia Luccarini, Camilla Morresi, Annalisa Zuccarotto, Mariorosario Masullo, Immacolata Castellano, and Elisabetta Damiani (*Polytechnic University of Marche, Ancona, Italy*)

PP I_F71_Mitochondrial plasticity as a key determinant for CVD risk in T2D

Laura Doblado Bueno, Sergio Gallego Rodriguez, Manuela Hidalgo, Maria Elisavet Plexida, Paula Solla, Cristina Sánchez Ramos, Esteban Jodar Gimeno, and María Monsalve (*Instituto de Investigaciones Biomédicas Sols-Morreal CSIC-UAM, Madrid, Spain*)

PP I_F72_Methanethiol oxidases in aging: Downregulation of SELENBP1 and its C. elegans orthologue SEMO-1 in senescent endothelial cells and in aged nematodes

Anne S. Scheller, Josephine Priebs, Karl Köhnlein, Thilo M. Philipp, Holger Steinbrenner, Blenda Emini, Regine Heller, and Lars O. Klotz (*Friedrich-Schiller University, Jena, Germany*)

PP I_F73_Redox signalling regulates Jagged1 intracellular domain fragment formation, altering endothelial cell cycle, adhesion, and extracellular matrix

Shawn Cottrill, Iain R. Phair, Agathe Lermant, Yashika Relan, and Colin E. Murdoch (*University of Dundee School of Medicine, Dundee, Scotland*)

PP I_F74_Site-specific activation of proton pump inhibitors by C4-type zinc fingers

Teresa Marker, Raphael R. Steimbach, Cecilia Perez-Borrajero, Marcin Luzarowski, Sibylle Schleich, Aurelio A. Telean, Bernd Simon, Aubry K. Miller, and Tobias P. Dick (*German Cancer Research Center, DKFZ, and Heidelberg University, Heidelberg, Germany*)

PP I_F75_N-Terminal proteomic profiling reveals distinct fragmentation patterns of proteins in different types of human atherosclerotic plaques

Lasse G. Lorentzen, Karin Yeung, Nikolaj Eldrup, Jonas P. Eiberg, and **Michael J. Davies** (*University of Copenhagen, Denmark*)

19:30 – 20:30 **Meet-the-Professors Session (Hall 1+2)**

20:30 – 23:00 **Welcome Reception and Live Music**

Thursday, June 6, 2024

08:00 – 09:00 **Sunrise Round Table I: Pillow Talks: From Academia to Industry (Hall 1)**

Chairs: Carmen Veith (Calliditas Therapeutics, Geneva, Switzerland) and Ufuk Ersoy (University of Liverpool, Liverpool, UK)

Selected Oral Presentations I

Mitochondria and the Brain (Hall 1)

Chairs: Anne Negré-Salvayre (University Paul Sabatier, Toulouse, France) and Andreas Daiber (University Medical Center Mainz, Mainz, Germany)

09:00 – 09:15

Mitochondrial ROS regulate neural precursor proliferation and neurogenesis in the developing brain

Regina Mengual, Veronica Bobo-Jimenez, Cristina Rodriguez, Maria Delgado-Esteban, Dario Garcia-Rodriguez, Juan P Bolanos, and **Angeles Almeida** (University of Salamanca, Salamanca, Spain)

09:15 – 09:30

Interplay between nitric oxide, mitochondria, and glutamate upon brain injury

Andrey V. Kozlov, Annette Vaglio-Garro, Arthur Hosmann, and Adelheid Weidinger (Ludwig Boltzmann Institute for Traumatology, Vienna, Austria)

09:30 – 09:45

Modulating vitamin C transport in hippocampal microglia to target synapse and memory deficits in Parkinson's disease

Camila C. Portugal, Ana M. Pacheco, Evelyn C. S. Santos, Márcia A. Liz, Renato Socodato, and João B. Relvas (University of Porto, Porto, Portugal)

09:45 – 10:00

Endothelial NADPH oxidase 5 (NOX5) promotes tight junction dysregulation and immune cell infiltration in the brain. Potential implications in ischemic stroke

09:00 – 09:15

Selected Oral Presentations II

Imaging Tools and Oxidative Markers (Hall 2)

Chairs: Josiane Cillard (University of Rennes, Rennes, France) and Florian Gruber (Medical University of Vienna, Vienna, Austria)

HyPer1 as a tool to measure the reductive power in cellular compartments

Olga Lyublinskaya, Andrei Zhuravlev, Daria Ezeriņa, Julia Ivanova, Nikita Guriev, and Joris Messens (RAS, Institute of Cytology, Moscow, Russia)

09:15 – 09:30

Pioneering precision: unraveling cellular bioenergetics with pH-control

Asal Ghaffari Zaki, Seyed Mohammad Miri, Şeyma Çimen, Tuba Akgül Çağlar, Esra Nur Yiğit, Mehmet Şerif Aydın, Gürkan Öztürk, and Emrah Eroğlu (Istanbul Medipol University, Istanbul, Türkiye)

09:30 – 09:45

Dimethyl labelling allows identification of novel protein crosslinks by mass spectrometry

Tina Nybo, Luke F. Gamon, Daniel Otzen, Michael J. Davies, and **Per Hägglund** (University of Copenhagen, Copenhagen, Denmark)

09:45 – 10:00

Characterisation of oxidative histone modification in neutrophil extracellular traps

Helen Hemmling, Line Hallberg, Per Hägglund, and Clare Hawkins (University of Copenhagen, Copenhagen, Denmark)

10:00 – 10:15	<p>Javier Marqués, Leyre Basurco, Elena Ainzúa, Enrique Santamaría, Joaquín Fernández, Davide Maselli, María Martínez-Azcona, Carmen Roncal, Marisol Aymerich, Aleksandar Ívetic, Josune Orbe, and Guillermo Zalba (<i>University of Navarra, Navarra, Spain</i>)</p> <p>Critical contribution of mitochondria in the development of cardiomyopathy linked to desmin mutation</p>	10:00 – 10:15	<p>Oxidised microRNAs as novel regulators of muscle loss during ageing</p> <p>Raul Gonzalez-Ojeda, Gibran Pedraza-Vazquez, Karen Guerrero-Vazquez, Ana Soriano, Rachel McCormick, Anthony Sannicandro, Brian McDonagh, and Katarzyna Goljanek-Whysall (<i>University of Galway, Galway, Ireland</i>)</p>
10:15 – 10:30	<p>Jean-Pierre Vartanian, Anthony Behin, Karim Wahbi, Pierre Joanne, and Onnik Agbulut (<i>Sorbonne University, Paris, France</i>)</p> <p>Proteasome activation increases lifespan through mitohormesis and UPR^{ER} activation</p> <p>Anna Gioran, Ieronymos Zoidakis, and Niki Chondrogianni (<i>ECR Fellowship</i>) (<i>National Hellenic Research Foundation, Athens, Greece</i>)</p>	10:15 – 10:30	<p>Muscle atrophy is rapidly induced by subcellular chemogenetic generation of hydrogen peroxide <i>in vivo</i> in mice</p> <p>Roberto Meneses-Valde, Carlos Henríquez-Olguín, Samantha Gallero Kaspar Wredstrøm Persson, and Thomas Elbenhardt Jensen (<i>University of Copenhagen, Copenhagen, Denmark</i>)</p>
10:30 – 11:00	Coffee Break Poster Viewing Exhibition		
11:00 – 11:15	<p>Selected Oral Presentations III</p> <p>Inflammation and Redox Dysregulation (<i>Hall 1</i>)</p> <p><i>Chairs: Aleksandra Jankovic (University of Belgrade, Belgrade, Serbia) and Fabio Virgili (National Institute for Bio-Structures and Bio-Systems, Rome, Italy)</i></p> <p>Bilirubin deficiency destabilizes atherosclerotic plaque associated with an increase in arterial inflammation and oxidative stress</p> <p>Weiyu Chen, Sergey Tumanov, Christopher P. Stanley, Stephanie M. Y. Kong, James Nadel, Niv Vigder, Darren L. Newington, Xiaosuo Wang, Louise L. Dunn, and Roland Stocker (<i>University of Sydney, Sydney, Australia</i>)</p>	11:00 – 11:15	<p>Selected Oral Presentations IV</p> <p>Redox Homeostasis and NRF2 (<i>Hall 2</i>)</p> <p><i>Chairs: Dolores Pérez-Sala (CSIC, Madrid, Spain) and Bato Korac (University of Belgrade, Belgrade, Serbia)</i></p> <p>TXNIP-mediated inhibition of glucose metabolism is a critical step in human erythroid differentiation</p> <p>Sheila Fernandez-Vega, Cristina Alvarez-Alvarez, Belen Garcia-Soler, Sergio Alcon-Rodriguez, Sandrina Kinet, Rosa M Sainz, Naomi Taylor, and Pedro Gonzalez-Menendez (<i>ECR Fellowship</i>) (<i>University of Oviedo, Oviedo, Spain</i>)</p>
11:15 – 11:30	<p>TRAF6 inhibition is a potential therapeutic target to suppress cardiovascular inflammation in animals with arterial hypertension</p>	11:15 – 11:30	<p>Redox regulation by coenzyme A</p> <p>Tracy Zhao and Ivan Gout (<i>University College London, London, UK</i>)</p>
		11:30 – 11:45	

11:30 – 11:45	<p>Lea Strohm, Henning Ubbens, Dominika Mihalikova, Michael Molitor, Stefanie Finger, Marin Kuntic, Matthias Oelze, Esther Lutgens, Philipp Lurz, Thomas Münzel, Andreas Daiber, and Steffen Daub (<i>University Medical Center Mainz, Mainz, Germany</i>)</p> <p>Aberrant NLRP3 inflammasome response in Rett syndrome: from ex vivo to in vivo models for investigating pathogenetic mechanisms and new potential therapeutic strategies</p>		<p>Identification of the NRF2/β-TrCP axis to protect against non-alcoholic steatohepatitis</p> <p>Raquel Fernández-Ginés, Raquel Míguez, José Antonio Encinar, Maribel Escoll, Daniel Carnicero-Senabre, José Jiménez-Villegas, Ángel J. García-Yagüe, Ana I. Rojo, and Antonio Cuadrado (<i>Autonomous University of Madrid, Madrid, Spain</i>)</p>
11:45 – 12:00	<p>Yeranuhi Hovhannisyann, Zhenlin Li, Domitille Callon, Rodolphe Suspene, Vivien Batoumeni, Alexis Canette, Jocelyne Blanc, Hakim Hocini, Cecile Lefebvre, Nora El-Jahrani, Maria Kitsara, Aurore L'honore, Ekaterini Kordeli, Paul Fornes, Jean-Paul Concordet, Gerard Tachdjian, Anne-Marie Rodriguez, Valeria Cordone, Alessandra Pecorelli, Francesca Frescura, Andrea Vallese, Anna Guiotto, Francesca Ferrara, Joussef Hayek, Sarah Beggiato, Luca Ferraro, and Giuseppe Valacchi (<i>University of Ferrara, Ferrara, Italy</i>)</p> <p>Dietary nitrate sustains nitric oxide production in the human stomach under oral dysbiosis</p>	11:45 – 12:00	<p>AMPK-mediated phosphorylation of Nrf2 at S374/S408/S433 favors its βTrCP2-mediated degradation in Keap1-deficient cells</p> <p>Eleni Petsouki; Elke Heiss, Sylvia Ender, and Shara Natalia Soca Cabrera (<i>University of Vienna, Vienna, Austria</i>)</p> <p>The role of Nrf2 in redox coupling of tumor and adipose tissue in orthotopic breast cancer model</p>
12:00 – 12:15	<p>Bárbara S. Rocha, Beatriz Paiva, João Gonçalves, Vitória Viegas, and João Laranjinha (<i>University of Coimbra, Coimbra, Portugal</i>)</p> <p>Transglutaminase 2 deficient sebocytes display disturbed autophagy and lipid secretion</p>	12:00 – 12:15	<p>Tamara Zakic, Maja Vukobratovic, Strahinja Djuric, Aleksandra Korac, Vanja Pekovic-Vaughan, Aleksandra Jankovic, and Bato Korac (<i>Institute for Biological Research Sinisa Stankovic, -Belgrade, Serbia</i>)</p> <p>The effects of physical activity on gene-specific methylation of antioxidant and tumour suppressor genes in post-surgery female breast cancer patients undergoing medical treatment</p>
12:00 – 12:15	<p>Alexandra Stiegler, Michaela Schirato, Christina Bauer, Ionela-Mariana Nagelreiter, Dora Kovacs, Mate Demeny, Emanuela Camera, Daniel Töröcsik, and Florian Gruber (<i>Medical University of Vienna, Vienna, Austria</i>)</p>	12:15 – 12:30	<p>Chantalle Moulton, Arianna Murri, Gianmarco Benotti, Cristina Fantini, Guglielmo Duranti, Roberta Ceci, Elisa Grazioli, Claudia Cerulli, Paolo Sgrò, Cristina Rossi, Stefano Magno, Luigi Di Luigi, Daniela Caporossi, Attilio Parisi, and Ivan Dimauro (<i>University of Rome "Foro Italico", Rome, Italy</i>)</p>
12:30 – 13:30	Lunch break Poster viewing Exhibition		12:30 – 13:30 Mentoring Program (Dining Hall)
<p>Catherine Pasquier Award Lecture (Hall 1+2) <i>Chairs: Josiane Cillard (University of Rennes, Rennes, France) and Clare Hawkins (University of Copenhagen, Copenhagen, Denmark)</i></p>			

13:30 – 14:00	<p>Eduardo Fuentes-Lemus (<i>University of Copenhagen, Copenhagen, Denmark</i>) Macromolecular crowding in the context of redox biology: effects on protein oxidation and aggregation</p> <p>Leopold Flohé Redox Pioneer Young Investigator Award Lecture (<i>Sponsored by SFRR-E and OCC</i>) (Hall 1+2) <i>Chairs: Niki Chondrogianni (National Hellenic Research Foundation, Athens, Greece) and Aphrodite Vasilaki (University of Liverpool, Liverpool, UK)</i></p>
14:00 – 14:30	<p>José Luis García-Giménez (<i>University of Valencia, Valencia, Spain</i>) (Hall 1+2) When epigenetics meets the redox regulation and signaling</p> <p>SFRR-E Symposium III – Exploiting Chemogenetic Approaches to Probe Disease Pathways Caused by Oxidative Stress (Hall 1+2) <i>Chairs: Thomas Michel (Harvard Medical School, Brigham and Women's Hospital, Boston, USA) and Helmut Sies (Heinrich Heine University, Düsseldorf, Germany)</i></p>
14:30 – 15:00	<p>Hadley Sikes (<i>Massachusetts Institute of Technology, Boston, MA, USA</i>) Intracellular hydrogen peroxide metabolism in cancer cells</p>
15:00 – 15:30	<p>Vsevolod V. Belousov (<i>Federal Center of Brain Research and Neurotechnologies, Federal Medical Biological Agency, Moscow, Russia</i>) Chemogenetic modulation of metabolism: from molecular tools to disease mechanisms</p>
15:30 – 16:00	<p>Jan Riemer (<i>University of Cologne, Cologne, Germany</i>) Redox chemogenetic studies in mitochondria and beyond</p>
16:00 – 17:00	<p>Guided Poster Presentations II, 6 Parallel groups, Coffee & Refreshments Group A: Redox in Skeletal Muscle <i>Chairs: Enrique Cadenas (University of Southern California, Los Angeles, CA, USA) and Ana Ledo (University of Coimbra, Coimbra, Portugal)</i></p> <p>PP II_A76_ RONS-mediated redox signaling in skeletal muscle: Impact on glucose uptake through AMPK and AKT pathways Eva Martín-Prieto, Escarlata Fernández-Puente, and Jesús Palomero (<i>University of Salamanca, Institute of Neurosciences of Castilla y León, INCYL, and Institute of Biomedical Research of Salamanca, IBSAL, Spain</i>)</p> <p>PP II_A77_ Lifelong protein restriction induces denervation and increases proteasomal activity in skeletal muscle Ufuk Ersoy, Atilla E. Altinpinar, Moussira Alameddine, Ioannis Kanakis, Mandy J. Peffers, Susan E. Ozanne, Katarzyna Goljanek-Whysall, Malcolm J. Jackson, and Aphrodite Vasilaki (<i>University of Liverpool, Liverpool, UK</i>)</p> <p>PP II_A78_ Skeletal muscle aquaporin function and role in redox signalling Caroline Amy Staunton, Maisey P. Peterson, Robert A. Heaton, Malcolm J. Jackson, and Richard Barrett-Jolley R (<i>University of Liverpool, Liverpool, UK</i>)</p> <p>PP II_A79_ Optimal timing for assessing oxidative stress after acute exercise in humans: a systematic review and meta-analysis Nikos V. Margaritelis, Nikos Georgogiannis, Chrysovalantis Stachteas, George G. Nastos, Panagiotis N. Chatzinikolaou, and Petros C. Dinas (<i>Aristotle University of Thessaloniki, Thessaloniki, Greece</i>)</p> <p>PP II_A80_ Redox signalling and biogenesis of extracellular vesicles (EVs): a perspective for exercise-induced muscle adaptation</p>

Laura Sireno, Cristina Fantini, and Daniela Caporossi (*University of Rome "Foro Italico", Rome, Italy*)

PP II_A81_Lifelong effects of maternal low protein diet on skeletal muscle development and ageing in male offsprings

Atilla E Altinpinar, Ufuk Ersoy, Moussira Alameddine, Vanja Pekovic-Vaughan, Ioannis Kanakis, Katarzyna Goljanek-Whysall, and Aphrodite Vasilaki (*University of Liverpool, Liverpool, UK*)

PP II_A82_Glutathione redox status regulates regenerative myogenic gene expression and functional recovery of human skeletal muscle in response to exercise-induced injury

Konstantinos Papanikolaou, Athanasios Z. Jamurtas, Dimitrios Draganidis, Nikos V. Margaritelis, Athanasios Poullos, Niki Syrou, Ioannis Baloyiannis, Constantinos Papadopoulos, George K. Papadimas, Margarita Chrysanthou-Piterou, Sophia Havaki, Vassilis G. Gorgoulis, Michalis G. Nikolaidis, Athanasios Chatzinikolaou, and Ioannis G. Fatouros (*University of Thessaly, Trikala, Greece*)

PP II_A83_Mitigating exercise-induced cellular damage in skeletal muscle: The role of CoQ10 supplementation in overtraining conditions

Loredana Rao, Francesco Mengarelli, Sonia Silvestri, Michele Guescini, Luca Tiano, and Andrea Frontini (*Polytechnic University of Marche, Ancona, Italy*)

Group B: Redox in Metabolism and Metabolic Diseases

Chairs: Giovanni E. Mann (King's College London, London, UK) and Carmen Veith (Calliditas Therapeutics, Geneva, Switzerland)

PP II_B84_A unique mode of coenzyme A binding to the nucleotide binding pocket of human metastasis suppressor NME1

Maria-Armineh Tossounian, Stefan Denchev Hristov, Jonathan Alexis Semelak, Bess Yi Kun Yu, Maria Baczynska, **Yuhan Zhao**, Dario Ariel Estrin, Madia Trujillo, Valeriy Filonenko, Jerome Gouge, and Ivan Gout (*University College London, London, UK*)

PP II_B85_Impact of acute endotoxemia on pancreatic mitochondrial function

Virginia Vanasco, Bruno H. Pappalettera, Juan S. Adán Areán, María I. Vaccaro, and **Silvia Alvarez** (*Universidad de Buenos Aires, Facultad de Farmacia y Bioquímica, Cátedra de Físicoquímica, Buenos Aires, Argentina*)

PP II_B86_Targeting monocyte immunometabolism: a novel potential approach for metabolic dysfunction associated steatohepatitis

Martina Ciarnelli, Tommaso Colangelo, Rosanna Villani, Antonino Romano, Gaetano Serviddio, and Moris Sangineto (*University of Foggia, Foggia, Italy*)

PP II_B87_Regulation of the ubiquitin-proteasome system and proteostasis with mTOR inhibition in cytochrome c oxidase deficiency

Ayse Tarbin Jannuzzi, Giacomo Giacchin, Valeria Balmaceda, and Carlo Viscomi (*Istanbul University, Istanbul, Türkiye, and University of Padova, Padova, Italy*)

PP II_B88_Hepatic Seipin deficiency reduces cholesterol mediated lipid droplet maturation dependent of endoplasmic reticulum stress but not lipophagy

Tugce Demirel-Yalciner, Bengu Cetinkaya, Erdi Sozen, and Nesrin Kartal Özer (*Üsküdar University, Istanbul, Türkiye*)

PP II_B89_Garcinoic acid alleviates cholesterol mediated lipid accumulation in hepatocytes; Role of NRF2/HO-1 pathway

Bengü Çetinkaya, Tuğçe Demirel-Yalçiner, Erdi Sözen, and Nesrin Kartal Özer (*Marmara University, Istanbul, Türkiye*)

PP II_B90_Role of SREBP1c and lipophagy in fructose mediated lipid accumulation in hepatocytes

Seher Mese, Tugce Demirel-Yalciner, Nesrin Kartal Özer, and Erdi Sözen (*Marmara University, Istanbul, Türkiye*)

PP II_B91_Redox coupling of metabolism and cell division

Andrei Zhuravlev, Prince S. Amponsah, Gilles Charvin, and Bruce Morgan (*Saarland University, Saarbrücken, Germany*)

PP II_B92_Effects of diet-induced Obesity on Subcellular Oxidative Stress in Cardiomyocytes

Samantha Gallero, T. C. Phung Pham, Carlos Henríquez-Olguín, Roberto Meneses-Valdés, Lykke Sylow, Valentina Parra, and Thomas E. Jensen (*University of Chile, Santiago, Chile, and University of Copenhagen, Copenhagen, Denmark*)

Group C: Redox in Cancer I

Chairs: Michael J. Davies (University of Copenhagen, Copenhagen, Denmark) and Veronica Lisi (Wake Forest University School of Medicine, Winston-Salem, NC, USA)

PP II_C93_NF- κ B and PRMT5 enhance ferroptosis sensitivity via BNIP3L/NIX-mediated mitophagy in synovial sarcoma

Hironari Tamiya and Sho Nakai (*Osaka International Cancer Institute, Osaka, Japan*)

PP II_C94_Reactive oxygen species (ROS)-activated cancer-specific camptothecin prodrugs

Michael Raucheisen, Insa Klemt, Viktor Reshetnikov, and Andriy Mokhir (*Friedrich-Alexander-University, Erlangen-Nürnberg, Erlangen, Germany*)

PP II_C95_Cellular adaptation to oxidative stress: Insights into peroxiporin function

Monika Mlinarić, Ivan Lučić, and Ana Čipak Gašparović (*Ruđer Bošković Institute, Zagreb, Croatia*)

PP II_C96_Low glucose enhances the ER-stress-mediated toxicity of ultrafine 10 nm magnetite nanoparticles to breast cancer cells

Jagoda Adamczyk-Grochala, Anna Lewinska, Adrian Radoń, Dominika Błoniarz, and Maciej Wnuk (*University of Rzeszow, Rzeszow, Poland*);

PP II_C97_Inactivation of runt domain transcription factor 3 via cytoplasmic existence under oxidative stress

Kyoung Ah Kang, Mei Jing Piao, Pincha Devage Sameera Madushan Fernando, Herath Mudiyanse Udari Lakmini Herath, and Jin Won Hyun (*Jeju National University, Jeju, South Korea*)

PP II_C98_Peroxiporins: can they modulate cancer resistance?

Monika Mlinarić, Ivan Lučić, Ana Josipa Jerončić, Lidija Milković, and **Ana Čipak Gašparović** (*Ruđer Bošković Institute, Zagreb, Croatia*)

PP II_C99_Dual NOX4/NOX1 inhibition by setanaxib halts cholangiocarcinoma progression by impairing cancer associated fibroblast activation

Josep Amengual, Ester Gonzalez-Sanchez, Noel P Fuste, Gabriel Pons, Laura Sererols-Viñas, Ania Alay, Sara Hijazo-Pechero, Beatriz Martín-Mur, Anna Esteve-Codina, Joana Ferrer, Gregory J Gores, Sumera I Ilyas, Diego Calvisi, Lynda Aoudjehane, Laura Fouassier, Cedric Coulouarn, Silvia Affo, Isabel Fabregat, and Javier Vaquero (*Bellvitge Biomedical Research Institute (IDIBELL), L'Hospitalet de Llobregat, Barcelona, and CIBEREHD, Instituto de Salud Carlos III, Madrid, Spain*)

PP II_C100_Ammiferocene-based ROS-enhancers for selective antitumor activity in mouse myeloblastoma tumor model

Galyna Bila, Andriy Mokhir, and **Rostyslav Bilyy** (*Danylo Halytsky Lviv National Medical University, and Lectinotest R&D, Lviv, Ukraine*)

Group D: Redox in Cancer II

Chairs: Erdi Sözen (Marmara University, Istanbul, Türkiye) and Veronica Miguel (Spanish National Centre for Cardiovascular Research, Madrid, Spain)

PP II_D101_ A novel RNA targeting ROS responsive N-Alkylaminoferrocene prodrug with high anti-cancer efficacy

Marlies R. Körber and Andriy Mokhir (*Friedrich-Alexander-Universität Erlangen-Nürnberg, Erlangen, Germany*)

PP II_D102_ Exploring weak points of cancer cells for the development of safe anticancer (pro)drugs

Andriy Mokhir (*Friedrich-Alexander-Universität Erlangen-Nürnberg, Erlangen, Germany*)

PP II_D103_ Role of the NADPH oxidase NOX4 in the regulation of Endoplasmic Reticulum (ER) stress in liver tumor cells

Gemma Gonfaus-Ortiz, Irene Peñuelas-Haro, Ismael Sánchez-Vera, Joan Gil, Esther Bertran, and Isabel Fabregat (*Bellvitge Biomedical Research Institute, IDIBELL, L'Hospitalet de Llobregat, Barcelona, Spain*)

PP II_D104_ AMP(K)lifying NRF2 signalling: the influence of the AMPK activator metformin on Nrf2 and Bach1 levels as well as on phenotypic responses in A549 lung cancer cells

Shara Natalia Sosa Cabrera, Eleni Petsouki, and Elke Heiss (*University of Vienna, Vienna, Austria*)

PP II_D105_ Comparative assessment of oxidative status of 3D melanoma spheroids obtained with different techniques

Mascia Benedusi, Giulia Trinchera, Alice Casoni, Jorge S. Burns, and Giuseppe Valacchi (*University of Ferrara, Ferrara, Italy*)

PP II_D106_ Exploring mitochondrial functionality: Implications for colorectal cancer development and diagnosis

Laura Doblado Bueno, Rosa González Martín, Mariano Patrizio del Rio, Viktoria Siafaka, María Labalde Martínez, Eduardo Ferrero-Herrero, and **María Monsalve** (*Instituto de Investigaciones Biomédicas Sols-Morreale, CSIC-UAM, Madrid, Spain*)

PP II_D107_ Androgen signalling-redoxosome (TRX/TXNIP) axis is crucial in the oxidative stress-mediated suppression of prostate cancer after androgen deprivation therapy

Sergio Alcon-Rodriguez, Sheila Fernandez-Vega, Juan C Mayo, Isabel Quiros-Gonzalez, and Rosa M Sainz (*University of Oviedo, Institute for Cancer Research of Principality of Asturias, IUOPA, and Institute for Biomedical Research of Principality of Asturias, ISPA, Oviedo, Spain*)

PP II_D108_ Antioxidant and cytotoxic properties of garlic and selected garlic constituents

Paulina Furdak, Grzegorz Bartosz, and **Izabela Sadowska-Bartosz** (*University of Rzeszów, Rzeszów, Poland*)

PP II_D109_ miRNAs boost breast cancer aggressiveness by regulating S-nitrosoglutathione reductase (GSNOR) levels

Gianmarco Matrullo, Valeria Fiorentini, Costanza Montagna, Giuseppe Filomeni, and Salvatore Rizza (*University of Rome "Tor Vergata", Rome, Italy*)

Group E: Redox in Neurologic and Neurodegenerative Disorders I

Chairs: Antonio Cuadrado (Autonomous University Madrid, Madrid, Spain) and Safiye Serdengeçti (Istanbul Medipol University, Istanbul, Türkiye)

PP II_E110_ Identification of nitrated proteins in human thrombi from ischemic cerebrovascular events

Romina Medeiros Figueredo, Elizabeth López-Achigar, Esperanza Morato López, Carlos García García, and Antonio Martínez Ruiz (*Universidad de la República, Montevideo, Uruguay*)

PP II_E111_ Modulation of oxidative neurometabolism in ischemia/reperfusion by nitrite

Cândida Dias, Cátia F. Lourenço, João Laranjinha, and **Ana Ledo** (*University of Coimbra, Coimbra, Portugal*)

PP II_E112_ Decoding the implications of subcellular H₂O₂ dynamics in a stroke-on-a-dish model using cerebral microvascular endothelial cells

Merve Kalkan-Yazıcı, Enes Görkem Kekeç, Melike Tuğba Üvak, and Emrah Eroğlu (*Istanbul Medipol University, Istanbul, Türkiye*)

PP II_E113_ Redox and lipidomic analysis of human brain microvascular endothelial cells (hCMEC/D3) adapted to physiological oxygen levels

Fan Yang, Daniel Simon, Emrah Eroglu, Dag Aarsland, Richard C.M. Siow, and Giovanni E. Mann (*King's College London, UK*)

PP II_E114_ Pericytes are implicated in no-reflow after cerebral ischemia

Nikolaus Plesnila (*University of Munich, Munich, Germany*)

PP II_E115_ The relationship between mitochondrial oxidative stress and Huntington's Disease progression

Esra Nur Yiğit, Mehmet Şerif Aydın, Emrah Eroğlu, and Gürkan Öztürk (*Istanbul Medipol University, Istanbul, Türkiye*)

PP II_E116_ Novel miRNA targets and characterisation of optic nerve function in a mouse model of hypoperfusion

Matthew Padgett, Rafael Sebastián Fort, Angus Brown, Alex Rathbone, Laura Rich, Sebastien Serres, Jennifer Cale, **Joern R. Steinert**, Rebecca C Trueman, Federico Dajas-Bailador, and Tracy D. Farr (*University of Nottingham, UK*)

PP II_E117_ Dimethylglycine and B-vitamins administration counteracts the inflammatory and oxidative state in autism spectrum disorders

Giovanna Trinchese, Fabiano Cimmino, Lidia Petrella, Gina Cavaliere, Angela Catapano, Baptiste Mateu, Luigia Turco, Lorena Coretti, Chiara Fogliano, Bice Avallone, Francesca Lembo, and Maria Pina Mollica (*University of Naples Federico II, Naples, Italy*)

Group F: Redox in Neurologic and Neurodegenerative Disorders II

Chairs: Bárbara Rocha (University of Coimbra, Coimbra, Portugal) and Timoteo Marchini (University Heart Center Freiburg-Bad Krozingen, Freiburg i. Breisgau, Germany)

PP II_F118_ Abnormal mitochondrion-NLRP3 inflammasome crosstalk in the pathophysiology of Autism Spectrum Disorder

Andrea Vallese, Valeria Cordone, Francesca Ferrara, Anna Guiotto, Laura Gemmo, Franco Cervellati, Joussef Hayek, Alessandra Pecorelli, and Giuseppe Valacchi (*University of Ferrara, Ferrara, Italy and North Carolina State University, Kannapolis, NC, USA*)

PP II_F119_ Anti-inflammatory effects of melanoidins in neuronal cells against cerebral ischemic injury are modulated by Nrf2-dependent gene expression

Pilar Muñiz, Monica Gisela Gerardi, Gonzalo Salazar, and Monica Cavia Saiz (*Department of Biotechnology and Food Science, University of Burgos, Burgos, Spain*)

PP II_F120_ Improving cognitive function with nitrate via nitric oxide-mediated neurovascular coupling in rodent models of vascular impairment

Cátia F. Lourenço, João S. Gonçalves, and João Laranjinha (*University of Coimbra, Coimbra, Portugal*)

PP II_F121_ Compensatory increase in glutathione content as an adaptive response to oxidative stress in SH-SY5Y cells

Grzegorz Bartosz, Natalia Pieńkowska, and **Izabela Sadowska-Bartosz** (*University of Rzeszów, Rzeszów, Poland*)

PP II_F122_ Neuroprotective potential of melanoidins extracted from bread: A comparative study using different proteolytic enzymes

Gonzalo Salazar, Monica Gisela Gerardi, Pilar Muñiz, and Mónica Cavia Saiz (*University of Burgos, Burgos, Spain*)

PP II_F123_Donepezil-loaded extracellular vesicles to mitigate both reactive oxygen species and inflammatory damage as a therapeutic approach for Alzheimer's disease

Rummenigge O Silva, Mohamed Haddad; Hermine Counil, Charlotte Zaouter, Shunmoogum A Patten, and **Charles Ramassamy** (*Institut National de la Recherche Scientifique, INRS, Laval, Canada*)

PP II_F124_The role of microRNAs in regulating neuromuscular degeneration in Amyotrophic Lateral Sclerosis

Lara Rodríguez Outeiriño, Raul Gonzalez-Ojeda, Anthony J. Sannicandro, María Borja-Gonzalez, and Katarzyna Goljanek-Whysall (*University of Galway, Galway, Ireland*)

17:00 – 18:00

SFRR-E General Assembly (Hall 1+2)

18:30 – 22:00

Bosphorus Tour and Dinner, Awards, and Live Music

Friday, June 7, 2024

08:00 – 09:00

Sunrise Round Table II: ROS Measurement: From Bedside to Bench (Hall 1+2)

Chairs: Timoteo Marchini (University Heart Center Freiburg-Bad Krozingen, Freiburg i. Breisgau, Germany) and Veronica Lisi (Wake Forest University School of Medicine, Winston-Salem, NC, USA)

09:00 – 09:20

ECR-Symposium: H₂O₂ on the Move: from Sub-cellular Redox Signals to Therapeutic Potential (Hall 1+2)

Chairs: Cristina Mas-Bargues (University of Valencia, Valencia, Spain) and Carmen Veith (Calliditas Therapeutics, Geneva, Switzerland)

David Heppner (University at Buffalo, Amherst, NY, USA)

Utilizing NOX enzymes as model systems for understanding and designing covalent inhibitors

09:20 – 09:40

Rut Espinosa (IDIBELL Bellvitge Biomedical Research Institute, L'Hospitalet de Llobregat, Spain)

Role of the NADPH oxidase NOX4 in the liver tumor microenvironment

09:40 – 10:00

Carlos Henriquez Olguin (University of Copenhagen, Copenhagen, Denmark)

A delicate subcellular hydrogen peroxide compartmentalization is crucial for muscle function and the beneficial effect of exercise

10:00 – 10:15

Carmen Veith (Calliditas Therapeutics, Geneva, Switzerland)

NADPH oxidase modulators from bench-to bedside: Challenges and opportunities

10:15 – 10:30

Discussion

10:30 – 11:00

Coffee Break / Poster Viewing / Exhibition

11:00 – 11:15

Young Investigator Award Presentations (Hall 1+2)

Chairs: Clare Hawkins (University of Copenhagen, Copenhagen, Denmark) and João Laranjinha (University of Coimbra, Coimbra, Portugal)

Susana Delgado-Martin et al. (University Hospital La Princesa, Madrid, Spain)

11:15 – 11:30	Oxidative damage in reperfusion after stroke: ferroptosis and the role of the mitochondrial sodium/calcium exchanger NCLX Tim Baldensperger <i>et al.</i> (University of Vienna, Vienna, Austria)
11:30 – 11:45	Role of lipofuscin in oxidative stress, lysosomal dysfunction, and cell death Vanesa Cepas-López <i>et al.</i> (University of Turin, Turin, Italy)
11:45 – 12:00	Defining single cell redox dynamics by using breast cancer patient-derived organoids (PDOs) and compartment-specific genetically-encoded redox biosensors Nejra Cosis-Mujkanovic <i>et al.</i> (Medical University of Graz, Graz, Austria)
12:00 – 12:15	The role of neutrophil-derived myeloperoxidase (MPO) in non-small cell lung cancer metastasis Palina Nepachalovich <i>et al.</i> (Dresden University of Technology, Dresden, Germany)
12:15 – 12:30	Mapping fatty acids turnover in ferroptosis by click chemistry-enhanced LC-MS Pablo Marti-Andres <i>et al.</i> (Karolinska Institute, Stockholm, Sweden, and University of Valencia, Valencia, Spain)
12:30 – 13:30	Beyond reduction: unveiling TRP14's dual role in cysteine homeostasis and redox dynamics
12:30 – 13:30	Lunch Break Poster Viewing Exhibition
13:30 – 14:00	Sponsored Session by Zeiss (Hall 1+2) Sven Terclavers (Carl Zeiss Microscopy GmbH, Jena, Germany) Observing Dynamics in Life Sciences
14:00 – 14:30	SFRR-E Symposium IV – Neurovascular Coupling and Nitric Oxide Brain Signaling in Cognitive Health and Disease (Hall 1+2) Chairs: Enrique Cadenas (University of Southern California, Los Angeles, CA, USA) and João Laranjinha (University of Coimbra, Coimbra, Portugal)
14:30 – 15:00	Clare Howarth (University of Sheffield, Sheffield, UK) Interneurons, nitric oxide, and neurovascular coupling
15:00 – 15:30	João M.N. Duarte (Lund University, Lund, Sweden) Regulation of cerebral blood flow and mitochondrial metabolism in animal models of insulin resistance
15:30 – 16:00	João Laranjinha (University of Coimbra, Coimbra, Portugal) Nitric oxide-mediated redox cycles in the brain supporting neurovascular coupling and cognitive enhancement
16:00 – 17:00	Closing Ceremony (Hall 1+2)
16:00 – 17:00	Poster Removal

Saturday, June 8, 2024

**Satellite Symposium II “Seeing is Believing”
(Istanbul Medipol University)**

07:30 – 08:30	Mediterranean Breakfast (<i>Istanbul Medipol University, South Campus</i>)
08:30 – 08:45	Opening and Rectors Welcome: Recep Öztürk , Vice Rector (<i>Istanbul Medipol University, Istanbul, Türkiye</i>)
	<u>Lectures – Part I</u>
	<i>Chairs: Bahar Güntekin (Istanbul Medipol University, Istanbul, Türkiye) and Yasemin Önder (Kadir Has University, Istanbul, Türkiye)</i>
08:45 – 09:15	Helmut Sies (<i>Heinrich Heine University, Düsseldorf, Germany</i>) Direct biophysical readout for noninvasive redox monitoring of intact cells and organs
09:15 – 09:45	Vsevolod Belousov (<i>Federal Center of Brain Research and Neurotechnologies, Federal Medical Biological Agency, Moscow, Russia</i>) Bioimaging and chemogenetics in redox metabolism studies
09:45 – 10:15	Nikolaus Plesnila (<i>Ludwig Maximilians-Universität München, Munich, Germany</i>) Understanding ischemic stroke by dynamic in vivo brain imaging
10:15 – 10:45	Coffee break I Virtual Reality Headset exhibition
	<u>Lectures - Part II</u>
	<i>Chairs: Nur Mustafaoglu (Sabanci University, Istanbul, Türkiye) and Özge Şensoy (Istanbul Medipol University, Istanbul, Türkiye)</i>
10:45 – 11:15	Onnik Agbulut (<i>Sorbonne University, Paris, France</i>) Modeling heart disease using human cells, bio-inspired cell culture systems and deep learning-based image analysis to discovery new therapeutic candidates
11:15 – 11:45	Ali Ertürk (<i>Helmholtz Center Munich, Munich, Germany</i>) Decoding diseases in 3D: AI-powered cell level imaging and omics
	<u>Industrial Symposium: Visionary perspectives: Zeiss Imaging Symposium</u> (<i>Medipol University, South Campus</i>)
11:45 – 12:15	Sven Terclavers (<i>Carl Zeiss Microscopy GmbH, Jena, Germany</i>) Observing dynamics in life sciences
12:15 – 13:15	Lunch break I Virtual Reality Headset exhibition
13:10 – 18:00	<u>Workshop at SABITA Excellence Center</u> (<i>Medipol University, North Campus</i>) <i>Workshop, hands-on experiments and demonstrations (12 workshops)</i>
18:00 – 22:00	Farewell at Bosphorus Banquet and Küçüksu Pavilion Soirée

