

Advances in the Study of Lipid and Protein Oxidation: From Methods to Targets

Marie Skłodowska-Curie Innovative Training Networks
'MASSTRPLAN' MASS Spectrometry TRaining network for Protein Lipid adduct Analysis
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March 13 - 15, 2019

University of Ghent, Het pand
Ghent, Oost-Vlaanderen 9000 Belgium

Scientific Program

Wednesday 13th March 2019

09:00 - 09:30	Registration
09:30 - 09:45	Welcome / Opening address <i>Prof. em. Paul Van Cauwenberge, MD, PhD and Honorary Rector at Ghent University</i>
09:45 - 10:15	Opening Plenary Pathophysiological Role of Protein Oxidation <i>Tilman Grune, German Institute of Human Nutrition, Germany</i>
10:15 - 13:00	Session 1: Analytical Methods for Lipid Oxidation
10:15 - 10:45	Metabolomic and Lipidomic Insights of Oxidized Lipids in Cardiovascular Diseases. <i>Huiyong Yin, Shanghai Institute of Nutrition and Metabolism, China</i>
10:45 - 11:00	MS analytical strategies for identifying nitroxidative modifications in phospholipids <i>Javier Fernando Montero-Bullon, University of Aveiro, Aveiro, Portugal</i>
11:00 - 11:15	Oral Presentation Available Slot
11:15 - 11:45	Coffee break
11:45 - 12:15	Effect of oxidized phospholipids on macrophage polarization <i>Norbert Leitinger, University of Virginia School of Medicine, USA</i>
12:15 - 12:30	Synthesis and analysis of protein-oxidized phospholipid adducts <i>Catarina Afonso, Aston University, Birmingham, UK</i>
12:30 - 12:45	Oral Presentation Available Slot
12:45 - 13:00	Flash presentations



13:00- 14:15	Lunch and posters
14:15 - 17:00	Session 2: Bioinformatic Tools for Detection of oxPTMs
14:15 – 14:45	Cheminformatics in oxidative lipidomics: challenges and perspectives <i>Gabriele Cruciani, Università degli Studi di Perugia, Italy</i>
14:45 – 15:00	Datamining based models for the identification of oxidized biomolecules in LC-MS data <i>Robbin Bouwmeester, VIB, Ghent, Belgium</i>
15:00 – 15:15	Oral Presentation Available Slot
15:15 – 15:45	Coffee break
15:45 – 16:15	Plenary 4 (title to be confirmed) <i>Sven Degroeve, VIB, Ghent, Belgium</i>
16:15 – 16:30	Oral Presentation Available Slot
16:30 – 16:45	Oral Presentation Available Slot
16:45 – 17:00	Flash presentations
17:00 – 18:30	Poster Session and refreshments

Thursday 14th March 2019

09:30 - 13:00	Session 3: New Approaches for the Analysis of oxPTMs
09:30 – 10:00	Proteomics Approaches to study protein modifications induced by oxidation stress <i>Kris Gevaert, VIB, Ghent, Belgium</i>
10:00 - 10:15	Comprehensive characterization of oxPTMs on anionic proteins by on-line coupling of Anion Exchange Chromatography and High-Resolution Orbitrap Mass Spectrometry <i>Angela Criscuolo, Thermo Fisher, Bremen, Germany</i>
10:15 – 10:30	Oral Presentation Available Slot
10:30 – 10:45	Fluorescence microscopy and mass spectrometry view on lipotoxicity in cardiac cells <i>Guilia Coliva, University of Leipzig, Leipzig, Germany</i>
10:45 - 11:15	Coffee break
11:15 – 11:45	Electrochemical oxidation of proteins as an analytical tool <i>Hjalmar Permentier, University of Groningen, Netherlands</i>
11:45 – 12:00	Strategies for confident identification of carbonylation sites in proteins present in plasma <i>Juan Camilo Rojas Echeverri, University of Leipzig, Leipzig, Germany</i>



12:00 – 12:15	Oral Presentation Available Slot
12:15 – 12:30	Mass Spectrometry and VC-1 Affinity Chromatography as an Integrated Strategy to Identify Pro-Inflammatory AGEs and ALEs <i>Marco Mol, University of Milan, Milan, Italy</i>
12:30 – 12:45	Flash Presentations
12:45 – 14:00	Lunch and posters
14:00 - 17:00	Session 4: Protein Targets of Oxidation and Lipoxidation
14:00 – 14:30	Acrolein scavenging as a therapeutic strategy in diabetic retinopathy <i>Tim Curtis, School of Medicine, Queen's University, Belfast, Northern Ireland</i>
14:30 – 14:45	Structure/function relationship of pyruvate kinase lipoxidation <i>Bebiana Sousa, Aston University, Birmingham, UK</i>
14:45 – 15:00	Oral Presentation Available Slot
15:00 – 15:15	Oral Presentation Available Slot
15:15 – 15:45	Coffee break
15:45 – 16:15	Lipid peroxidation products and protein dysfunction in vascular diseases <i>Anne Negre-Salvayre, INSERM, Toulouse, France</i>
16:15 – 16:30	Lipoxidation impairs cortical distribution of vimentin filaments in cell division <i>Sofia Duarte, CSIC-CIB, Madrid, Spain</i>
16:30 – 16:45	Oral Presentation Available Slot
16:45 – 17:00	Characterization of vimentin as target of lipoxidation <i>Andreia Monico, CSIC-CIB, Madrid, Spain</i>
17:00 – 17:15	Flash Presentations
17:00 – 18:30	Poster Session and refreshments
19:30 – 22:30	Conference Dinner

Friday 15th March 2019

09:30 - 12:45	Session 5: Redoxomics: Clinical and Industrial Applications
09:30 - 10:00	Metabolomic from clinical research to diagnosis <i>Uta Ceglarek, Universitätsklinikum Leipzig, Germany</i>
10:00 - 10:15	Hepatocellular carcinoma and cholangiocarcinoma: serum phospholipidome, tumour immune cell infiltrate and peripheral immune cells characterization <i>Carmen Martin-Sierra, Centro Hospitalar e Universitário de Coimbra, Coimbra, Portugal</i>



10:15 – 10:30	Oral Presentation Available Slot
10:30 – 10:45	Biological effects of glycated albumin on cardiomyocytes: possible implications in the development and progression of heart failure. <i>Alma Martinez-Fernandez, Centro Cardiologico Monzino, Milan, Italy</i>
10:45 -11:15	Coffee break
11:15 – 11:45	Detecting lipoxidation: diagnostic tools for the translation and commercial application <i>Isabel Pinto, Mologic, Bedford, UK</i>
11:45 – 12:00	Oral Presentation Available Slot
12:00 – 12:15	Mass spectrometry analytical strategies for identifying modified aminophospholipids and their correlation with immunity <i>Simone Colombo, University of Aveiro, Aveiro, Portugal</i>
12:15 – 12:45	Closing Plenary <i>Corinne Spickett, Aston University, Birmingham, UK</i>
12:45 – 13:45	Lunch and prizes
14:00 - 17:00	Outreach Event/ Public Lecture We Are What We Eat <i>Dr James Brown, Aston University, Birmingham, UK</i>

Speakers Dinner – Wednesday 13th March (time to be confirmed)

Het Pakhuis, Schuurkenstraat 4 - 9000 Ghent

<https://www.pakhuis.be/en/>

Scientific Organizing Committee:

Professor Corinne Spickett
Professor Lennart Martens
Professor Pedro Domingues
Dr Maria Fedorova
Professor Dolores Pérez-Sala

Local Organizers:

Robbin Bouwmeester
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