**Dubrovnik Summer School on Molecular Biosciences in Medicine with the International Oxidative Stress Symposium**

**University of Dubrovnik, September 11-15, 2023**

Preliminary Program

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| **Monday** | **Tuesday** | **Wednesday** | **Thursday** | **Friday** |
| 10:00 Opening  Introduction to molecular aspects of oxidative stress in medicine (NZ\*) | 10:00  Lipid geometrical isomerism: from chemistry to biology and diagnostics (CC) | 10:00  Uncovering proteotypic signatures in disease by proteomics (UR) | 10:00  Evaluation of oxidative stress in a clinical setting (UR) | 10:00  **International Symposium on Oxidative Stress**  Covalent modification of proteins under oxidative stress (KU) |
| Oxidative stress and the role of biomimetic radical chemistry in discovery of biomarkers (CC) | Oxidized LDL in atherosclerosis: An update (ANS) | Utilizing biological databases to identify potentially disease-driving PTMs on proteins (UR) | Oncogenetic mechanisms and energetic metabolism in malignant mesothelioma (SS) | Post-translational modifications of placental endothelial nitric oxide synthase (eNOS) by oxidized lipids: Role in preeclampsia (ANS) |
| 11:45 Coffee break | 11:45 Coffee break | 11:45 Coffee break | 11:45 Coffee break | 11:45 Coffee break |
| 12:00  Introduction to Lipidomics (CF) | 12:00  Crispr/Cas9 mediated targeted deletions to uncover etiologic disease-causing molecular switches (UR) | 12:00  Purine lesions in DNA damage: chemical, analytical, biological and diagnostic significance (CC) | 12:00  Molecular background of BPC 157 action (SS) | 12:00  Essential trace element selenium and redox regulation: its metabolism, physiological function, and related diseases (YS) |
| 13:00 Lunch | 13:00 Lunch | 13:00 Lunch | 13:00 Lunch | 13:00 Lunch |
| 16:00  Lipidomics and Human Health: The impact of membrane lipidome in the inflammatory scenario; case studies (CF) | 16:00  Lipid peroxidation in spontaneous regression of cancer (NZ) | 16:00  Lipid peroxidation and aging:  Focus on accelerated placental aging and skin photoaging (ANS) | 16:00  A role for oxidized LDL and lipid peroxidation in neoangiogenesis (ANS) | 16:00  KY – Pending  Structural library and visualization of endogenously oxidized lipids |
| 17:00 Coffee break | Lipidomics and Human Health: membrane lipidomics in oncology (CF) | 17:00 Coffee break | Lipidomics and Human Health: Quality of fats in overweight-obesity progression (CF) | Lipid peroxidation, vascular and systemic oxidative stress in aggressive COVID-19 (NZ) |
| Selected Oral Presentations | 17:30 Coffee break | Selected Oral Presentations | 17:30 Coffee break | Closing remarks |
| Welcome Cocktail | SEMINAR:  Valorization of fatty acid-based membrane lipidomics as a spin-off company: a successful story (CC) | Concert | SEMINAR:  How not to screw-up material for histological, immunohistochemical and molecular analysis (SS) | Farewell dinner |

\* NZ - Neven Zarkovic, Croatia

CC - Chryssostomos Chatgilialoglu, Italy & Poland

CF - Carla Ferreri, Italy

ANS - Anne Nègre-Salvayre, France

UR - Ulrike Resch, Austria

SS – Sven Seiwerth, Croatia

KU – Koji Uchida, Japan

YS – Yoshiro Saito, Japan

KY – Ken-Ichi Yamada, Japan – not confirmed with certainty