OXYGEN CLUB OF CALIFORNIA WORLD CONGRESS 2014

7-10 May 2014 University of California Davis Convention Center

OXIDANTS AND ANTIOXIDANTS IN NUTRITION AND REDOX BIOLOGY IN DEVELOPMENT AND HEALTH

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SCIENTIFIC PROGRAM

FLAVONOIDS: FROM METABOLISM TO DIETARY GUIDELINES

[2-¹⁴C](–)-Epicatechin metabolomics: absorption and metabolism in the small intestine and colon – *Alan Crozier*

miRNA as molecular targets of flavonoid metabolites involved in preservation of endothelial cell function – *Dragan Milenkovic*

Flavanols and cardiovascular health: clinical outcomes of the FLAVIOLA project (Seventh Framework Programme of the European Commission) – *Malte Kelm*

Anthocyanin intake and the risk of cardiovascular disease – *Aydin Cassidy*

Flavonoids improve spatial memory performance and increase hippocampal brain-derived neurotrophic factor – *Jeremy P. Spencer*

Dietary guidelines on flavonoids – Where are we today? – *Joanne R. Lupton*

VITAMIN E IN TRANSLATIONAL MEDICINE

Vitamin E and nonalcoholic fatty liver disease – Arun Sanyal

Isoforms of vitamin E differentially regulate inflammation – *Joan M. Cook-Mills*

Anti-inflammatory functions of vitamin E metabolites – *Qing Jiang*

Vitamin E and apoptosis: free radical scavenging versus regulation of enzymatic lipid peroxidation – *Valerian Kagan*

Promotion of plasma membrane repair by vitamin E – Paul L. McNeil

α-Tocotrienol: Multimodal protection against stroke – *Chandan K. Sen*

The location, activity, and behavior of α -tocopherol in membranes – *Jeffrey Atkinson*

REDOX SIGNALING AND SYSTEMS BIOLOGY IN HEALTH

Thiol Signaling, redox circuits, and systems biology in health status – Dean P. Jones

Coupling metabolism to local circadian clock via reversible hyperoxidation of peroxidoxin III – *Sue Goo Rhee*.

Role of selenoproteins in insulin-regulated energy metabolism – *Holger Steinbrenner*

Brain cholesterol oxidation in the pathogenesis of Alzheimer's disease – Giuseppe Poli

Fusion and fission: interlinked processes critical for mitochondrial health – David Chan

Mitochondrial dynamics – *Jodi Nunnari*

Measuring and manipulating mitochondrial ROS signals – *Michael Murphy*

Metabolomics analyses of mitochondrial metabolism – *Oliver Fiehn*

THE FIRST 1000 DAYS: FROM METABOLIC SIGNAL TO SOCIETAL IMPACT

From signal to society: what needs to be done – *Klaus Kraemer*

Gut microbiota: nutritionally and environmentally sensitive ecosystems that influence the host biology – *Mark J Mannary*

The damaged gut: enteropathy, enteric infection, and malnutrition – Christine P. Stewart

Carotenoid and retinoid signaling in early development: priming of metabolic diseases – *Johannes von Lintig*

Integration of basic biology and public health research: bringing research disciplines together – *Lindsay H Allen*

Developmental programming for obesity: epigenetic modifications in the hypothalamus – *Mulchand Patel*

Early nutrition: consequences for the immune system – *Charles Stephensen*

ROUND TABLE DISCUSSION. MICRONUTRIENTS: THE FIRST 1000 DAYS

Discussion Leader: Helmut Sies

ROUND TABLE DISCUSSION. MITOCHONDRIAL SIGNALING IN HEALTH AND DISEASE

Discussion Leader: Michael Murphy

SHORT TALKS BY YOUNG INVESTIGATORS

To be selected from submitted abstracts