PLENARY SESSION TOPICS

WEDNESDAY, NOVEMBER 20
FROM BENCH TO BEDSIDE AND BACK: REDOX IN MEDICINE
1. Glutaredoxin 1 and the Sexual Dimorphic Reprogramming of Blood Monocytes by Nutrient Stress
2. Mitochondria-Coupled Glucose Phosphorylation in Brain: Redox Role During Neurodevelopment in Health and Disease
3. Visualizing Glutathione Utilization in the Zebrafish Embryo: When and Where
4. Vitamin C and the Cancer Epigenome: Translating to Treatment of Leukemia

THURSDAY, NOVEMBER 21
PS 1: INTRACELLULAR METAL TRAFFICKING: CONSEQUENCES FOR REDOX ENZYME (ALTERNATIVE) ACTIVITIES
1. Accounting for Essential Transition Metals in Cancer and Development
2. Metals and SOD Enzymes: Tales from a Successful Fungal Pathogen
3. The Many Faces of Superoxide Dismutase 2: A Metal Issue?
4. Iron Takes Center Stage in Cancer Therapeutics: Ferroptosis and Ovarian Cancer

PS 2: OXY-INFLAMMATION, REDOX SIGNALING AND AUTOPHAGY: CROSSTALK IN HEALTH AND DISEASE
1. Autophagy, Mitochondria and Oxidative Stress: Crosstalk and Redox Signaling
2. Crosstalk Between Redox Signaling and Autophagy in Cerebral Cavernous Malformation Disease: From Basic Mechanisms to Therapeutic Strategies
3. The Pharmacology of Mitochondrial Cholesterol in Redox Signalling, Quality Control and Retrograde Response
4. Autophagy Modulation for Precision Cancer (immuno)Therapy

FRIDAY, NOVEMBER 22
PS 3: BEYOND THE CELL: OXIDATION OF THE EXTRACELLULAR MATRIX IN DEVELOPMENT, DISEASE AND TREATMENT
1. Redox Perturbations, Extracellular Matrix and Lung Fibrosis
2. Modifications to the Disease Structure of Arterial Wall as a Driver of Cardiovascular Disease
3. Peroxidase-Mediated Assembly and Repair of Tissues in Development and Disease
4. Light-Activated Tissue Repair and Regeneration

PS 4: NRF N' TURF: NRF2 REDOX SIGNALING AND STRATEGIES TO DRUG CANCER CELL METABOLISM
1. Investigation of Selective NRF2-Dependent Metabolic Liabilities
2. Redox Sensors to Map Druggable Co-dependencies in NRF2 Cancers
3. Translating Nrf2-regulated Translation
4. Mutual Exclusivity of Nrf2 and Engineering Cancer Metabolism

SATURDAY, NOVEMBER 23
PS 5: REDOX SIGNALING IN EXERCISE ADAPTATION
1. Redox Responses to Acute and Regular Exercise are Influenced by Age and Sex in Humans
2. EcSOD in the Health Benefits of Exercise
3. Redox Proteomics and Mitochondrial Dynamis in Skeletal Muscle
4. Liver Macrophages Regulate the Antioxidant Response
PLENARY SESSION TOPICS

WEDNESDAY, NOVEMBER 14

REDOX MODULATION OF HYPERTENSION

1. Regulation of Vessel Tone by Heme Globins
2. Inorganic Nitrate as a Regulator of Vascular Function
3. Redox Signaling in the Brain and Antioxidant-Based Therapeutics: Consequences for Hypertension

THURSDAY, NOVEMBER 15

PS 1: ADVANCES IN CYSTEINE-BASED REDOX SIGNALING MECHANISMS

1. Targetable Reactive Electrophiles and Oxidants (T-REX) Technology to Identify "Privileged" Redox Sensors
2. Identification and Analysis of Thiol-Based Signaling Complexes
3. Redox Modification of the Cytoskeleton During Cell Adhesion and Migration
4. Assessing the Impact of Redox Modification on the Global Substrate Selection of Protein Kinases

PS 2: NUTRITION AND REDOX SIGNALING: FROM NUTRIENTS TO BIOACTIVES

1. Mitochondria, Nrf2 and mTOR
2. Plant Bioactives and the Intestinal Barrier: Redox Signaling and Implications for Insulin Resistance
3. The Impact of Polyphenols on Human Vascular and Cognitive Health: The Role of Intracellular Signaling
4. Regulation of HO-1 by Flavonoids: Mechanisms and Health Possibilities

FRIDAY, NOVEMBER 16

PS 1: REGULATORY ROLE OF RNA/DNA OXIDATION AND ITS FUNCTIONAL SIGNIFICANCE IN DISEASE

1. 8-oxoG formation: Impact in Gene Promoters on Gene Transcription and Mapping Studies
2. The Impact of Oxidative DNA Lesions on Telomere Maintenance
3. Cellular Consequences and Repair of Oxidised RNA
4. Oxidative Stress to RNA/DNA in the Clinical Setting: Clinical Intervention Trials and Epidemiology

PS 2: REDOX METABOLISM IN CANCER STEM CELL STATE SWITCHING

1. Metabolic Regulation of Cell State
2. PGC1α at the Nexus of Cancer Stem Cell Fates
3. Social Behavior of Breast Cancer Stem Cells in Metastasis
4. Mitochondrial Regulation of Normal and Leukemic Stem Cells

SATURDAY, NOVEMBER 17

TARGETED AND LOCAL DELIVERY OF REDOX THERAPEUTICS: INTERVENTION WHERE IT MATTERS

1. Local and Targeted Redox Therapies for the Vasculature
2. Extracellular Vesicles as Drug Delivery Vehicles for Potent Redox Enzyme Catalase to Treat Parkinson's Disease
3. Measurement of Real-time Nitric Oxide (NO) Release from Macrophages, Fibroblasts and Keratinocytes to Direct the Development of Smart Dressings for Diabetic Foot Ulcers
4. Harnessing the Therapeutic Potential of Nitric Oxide Through Nanoparticle Technology
PLENARY SESSION TOPICS

› WEDNESDAY, NOVEMBER 29
  TRANSLATIONAL ASPECTS OF REDOX SIGNALING
  1. The Regulation of Nox in Vascular Disease
  2. Redox Regulation of Kinases in the Heart
  3. Glutathione, Glutaredoxin and S-glutathionylation in Lung Disease

› THURSDAY, NOVEMBER 30
  PS 1: SELENIUM IN BIOLOGY AND MEDICINE: CELEBRATING THE DISCOVERY OF SELENIUM BY JACOB BERZELIUS AND ITS DISCOVERY IN BIOMOLECULES BY TERRY STADTMAN
  1. Scientific Discoveries: Berzelius, Stadtman, and the Chemistry of Selenium
  2. How Selenocysteine Altered Our Understanding of Redox Biology
  3. Selenium Intake and Status in Health & Disease

  PS 2: FERROPTOSIS: THE RANCID SMELL OF DEATH
  1. Ferroptosis: Mechanisms and Therapeutic Applications
  2. Oxidation of Phosphatidylethanolamines as Ferroptotic Signals: Control by Lipoxigenases
  3. Ferroptosis, Mechanism of Cell Death in Vitamin E Deficiency During Embryogenesis?
  4. In Vivo Relevance of Ferroptotic Cell Death

› FRIDAY, DECEMBER 1
  PS 1: REDOX CONTROL OF CALCIUM HOMEOSTASIS IN HEALTH AND DISEASE
  1. CaMKII, ROS and Fight or Flight Physiology
  2. Local Ca\textsuperscript{2+}-ROS Cross Talk Between ER and Mitochondria
  3. Role of the Ca\textsuperscript{2+} Channel TRPM2 in Regulation of Oxidative Stress and Energy Balance
  4. Redox Regulation of Ca\textsuperscript{2+} Channels: From Orai to MCU

  PS 2: REDOX BIOLOGY OF NORMAL VS TUMOR CELLS: A THERAPEUTIC TARGET
  1. Targeting Redox Metabolism for Cancer Therapy: From the Bench to the Bedside
  2. Enhancement of Normal Hematopoietic Stem Cells by Redox-active Antioxidants
  3. Use of Manganese Porphyrins as a Chemotherapeutic in Lymphoma
  4. Protection of Neurocognitive Function During Cranial Irradiation of Brain Tumors

› SATURDAY, DECEMBER 2
  MITOCNDRIAL DYNAMICS IN HEALTH AND DISEASE
  1. Autophagy Functions of Genes Mutated in ALS and Parkinson’s Disease
  2. PINK1/Parkin and Mitochondrial Dynamics in Neurodegeneration
  3. Mitochondrial Dynamics in Lung Fibrosis
  4. Molecular Analysis of Mitochondrial Dynamics
PLENARY SESSION TOPICS

▶ WEDNESDAY, NOVEMBER 16
BIOMARKERS FOR OXIDATIVE STRESS, TRANSLATION OF CHEMICAL AND BIOLOGICAL RESEARCH INTO THE IN VIVO AND CLINICAL SETTING
  1. Comparison of Different Oxidative Stress Biomarkers in vivo
  2. Sterol Oxidation: Errors in Cholesterol Biosynthesis
  3. Are There Free Radical Diseases?

▶ THURSDAY, NOVEMBER 17
PS 1: PIVOTAL ROLE OF H₂O₂ IN REDOX REGULATION OF SIGNALING AND TRANSCRIPTION
  1. Sites of Mitochondrial Hydrogen Peroxide Generation
  2. Mechanisms of Mitochondrial ROS Production and Their Role in Redox Signaling
  3. Hydrogen Peroxide Release from Mitochondria in Regulating Metabolic Functions
  4. Thioredoxin Reductase 1 (TrxR1) Links Cellular Signaling Pathways Controlling Cellular Phenotype to H₂O₂ Modulation, Nitrosylation, and Persulfidation Pathways

PS 2: DUAL ROLE OF OXIDANTS GENERATED BY LEUKOCYTE ENZYMES IN HEALTH AND DISEASE
  1. Positives and Negatives of Oxidant Formation by Neutrophils
  2. Neutrophil Extracellular Traps
  3. Inflammation, Oxidation and Lung Damage
  4. Myeloperoxidase Drives Adverse Ventricular Remodeling in Heart Failure by Dysregulating Peripheral Vascular Tone

▶ FRIDAY, NOVEMBER 18
PS 1: THE ROLE OF REDOX REGULATION ON EPIGENETICS IN HUMAN DISEASES
  1. Regulation of the Epigenome by Vitamin C
  2. Epigenetic Regulation of SOD3 in Pulmonary Arterial Hypertension
  3. Epigenetic Regulation of Nrf2 in Cancer
  4. Redox Regulation of Mito-senesence and Dysfunctional Epigenome

PS 2: THE LANDSCAPE OF REDUCTIVE STRESS
  1. Reductive Stress of ER and its Function in Aging
  2. Adaptive Responses to Reductive Stress in Hypoxia
  3. Reductive Stress Caused by Sustained Nrf2 Activation: Implications for its Oncogenic Potential
  4. Reductive Stress: Novel Mechanism for Cardiac Remodeling

▶ SATURDAY, NOVEMBER 19
OXYGEN MATTERS IN REDOX BIOLOGY
  1. Sleep Apnea, Oxygen Radicals, and Hypertension
  2. Nrf2-Keap1 Regulated Redox Signaling Under Physiologica Normoxia
  3. Acute Oxygen Sensing Mechanisms
  4. Setting the Mood: Regulation of Circuit Function and Behavior by Ambient Oxygen
Plenary Session Topics

WEDNESDAY, NOVEMBER 18
SPECIAL PLENARY SESSION | FUNCTIONAL AND CHEMICAL CROSS-TALK BETWEEN STORAGE FORMS OF NO AND SULFIDE – A MULTI-LEVEL AFFAIR
  1. Ultraviolet Light Bioactivates NO Storage Forms in Human Skin: The Potential of Sunlight for Cardiometabolic Regulation
  2. Mobilization of NO Bioactivity by Sulfide: Chemical Biology and Bioactivity of S/N Hybrid Molecules in the Cardiovascular System

SPECIAL PLENARY SESSION | 25th Anniversary of the Discovery of Isoprostaness

THURSDAY, NOVEMBER 19
OXIDATIVE STRESS IN METABOLIC DYSFUNCTION AND DIABETES: THE CHICKEN OR THE EGG?
  1. Role of Vascular Oxidative Stress in Obesity
  2. Free Radical-Mediated Induction of Reduced Insulin Production in Pancreatic Beta Cells
  3. High-fat Diet-induced Obesity: Interplay Between Oxidative Stress and Immune Response in the Liver
  4. The Impact of Elevated Xanthine Oxidase on the Cardiovascular System in Obese Children

FRIDAY, NOVEMBER 20
CONVERGENCE OF REDOX STATE AND INTERMEDIARY METABOLISM IN HEALTH AND DISEASE
  1. Regulation of Mitochondrial ROS by Succinate
  2. Sirtuins in Stress Response
  3. Mitochondria and Cancer
  4. Metabolic Control of Cardiac Adaptations to Stress

SATURDAY, NOVEMBER 21
THE REDOX LANDSCAPE OF PROTEIN FOLDING IN THE ENDOPLASMIC RETICULUM
  1. Redox Signaling in the Endoplasmic Reticulum
  2. Balancing the Redox Environment within the Endoplasmic Reticulum
  3. Endoplasmic Reticulum Transporters Shaping Luminal Redox
  4. Linking Proteostasis and Signaling in the Early Secretory Compartment
THURSDAY, NOVEMBER 20
INSIGHTS INTO MECHANISMS OF NEURODEGENERATIVE DISEASES
1. Cellular Senescence and Brain Aging
2. Understanding the Pathways that Lead to Nerve Cell Death in Huntington’s Disease
3. Targeting Free Radicals: A Valid Therapeutic Approach for Huntington’s Disease?
4. Elevated Oxidative Stress in Motor Neurons Initiates Loss of Neuromuscular Junction Structure and Function, Muscle Weakness and Atrophy

FRIDAY, NOVEMBER 21
THE Keap1-Nrf2 SIGNALING PATHWAY: ROLE IN DISEASE AND PHARMACOLOGICAL APPROACHES
1. Targeting the Keap1/Nrf2 Pathway for Chemoprotection
2. Nrf2 Regulation and its Dual Role in Cancer
3. Crosstalk Between Nrf2 and Notch Signaling
4. Development of a Novel Neuroprotective Strategy by the Cooperative Transcriptional Network Centered on Nrf2

SATURDAY, NOVEMBER 22
OXYGEN IN DEVELOPMENT AND CANCER
1. Oxygen-Dependent Regulation of Cancer Epigenetics
2. Manganese Superoxide Dismutase Regulates a Metabolic Switch During the Mammalian Cell Cycle
3. The Hypoxic Control of Stemness
4. Hypoxia, ROS, and mRNA Translation Control in the Tumor Cell Stress Response

SUNDAY, NOVEMBER 23
IMPORTANT BIOLOGICAL FUNCTIONS OF THE NEGLECTED SOURCES OF REACTIVE OXYGEN SPECIES
1. Monoamine Oxidase - Not Just to Detoxify Catecholamines in Nerves
2. Lysyl Oxidases: Emerging Promoters of Senescence Escape, Tumor Initiation and Progression
3. Xanthine Oxidase: A Janus-Faced Enzyme in Intestinal Infection
4. Aldehyde Oxidase: Another Important Source of ROS in Biological Tissues
Plenary Session Topics

▶ Thursday, November 21
NADPH OXIDASES AS THERAPEUTIC TARGETS
  1. Nox Enzymes as Drug Targets in CNS Diseases
  2. An Evolutionary Perspective on NOX Enzymes in Lung Biology and Disease
  3. A Novel Inhibitor of the PLA₂ Activity of Peroxiredoxin 6 Inhibits NADPH Oxidase Activation
  4. Hepatocyte Nox Proteins in Chronic Hepatitis C and Hepatocellular Carcinoma

▶ Friday, November 22
REDOX BIOLOGY OF HEMOGLOBINS: NEW CONCEPTS FROM BIOCHEMISTRY TO PHYSIOLOGY
  1. Structure and Reactivity of Hexacoordinated Hemoglobins
  2. Myoglobin Functions in the Heart
  3. Neuroglobin as a Neuroprotectant
  4. Regulation of NO by Hemoglobin in the Endothelium

▶ Saturday, November 23
MITOCHONDRIAL DRIVEN MECHANISMS OF REDOX SIGNALING IN DISEASE
  1. Mitochondria and Arrhythmias
  2. Mechanisms Linking mtDNA Damage and Aging
  3. Mitochondrial-Cytonuclear Crosstalk in Heart Failure
  4. Antioxidant to Pro-oxidant Therapy for Cancer

▶ Sunday, November 24
TESTING OF CANCER’S REDOX METTLE
  1. Cancer, Cells with Irons in the Fire
  2. Arsenic Therapeutics in Treatment of Cancer: Redox Chemistry and Zinc Biology?
  3. Nitric Oxide and Non-heme Iron: New Signaling Mechanisms in Cancer
  4. Angiogenesis Biomimetic: Extracellular Matrix and Oxygen
Plenary Session Topics

Thursday, November 15
REDOX REGULATION OF CELLULAR ADAPTIVE RESPONSES
1. ATM in the Cytoplasm: ROS Acting as SOS Signals
2. Mitochondrial Stress Signaling in Disease and Aging
3. Oxidative Stress and Aging
4. Harnessing Redox Regulation of Protein Tyrosine Phosphatases

Friday, November 16
REDOX LUNCHBOX: WHAT YOUR GUT IS TELLING YOU
1. Role of Commensal Enteric Bacteria in the Induction and Regulation of Chronic Gut Inflammation
2. Microbial Stimulated Redox Signaling in Gut Homeostasis
3. Gut Flora and Cardiovascular Disease Pathogenesis
4. Mechanisms of Microbial Probiotics in Treatment of Digestive Disease

Saturday, November 17
CELLULAR REDOX SENSORS
1. Order out of Disorder – The Working Mechanism of an Intrinsically Disordered Chaperone
2. Redox Sensors that Mediate Wound Responses in Zebrafish
3. Regulation of EGFR Signaling by Cysteine Sulfenylation
4. Active Site and Interface Communication Regulating Peroxiredoxin Functions

Sunday, November 18
THE FREE RADICAL THEORY OF AGING, REVISITED
1. Transcriptional Regulators are Key to Oxidative Stress Responses and Longevity
2. Senescence Response to Oxidative & Genotoxic Stress: A Link Between Aging and Disease
3. How Well Does the Free Radical Theory of Aging Stand Up to Experimental Testing?
4. Longevity Regulation by Nutrient Signaling Pathways: Radical Problems Without Anti-Radical Solutions
Plenary Session Topics

Thursday, November 17
REDOX REGULATION BY EPIGENETICS
  1. Control of Antioxidant Activities by microRNAs During Red Blood Cell Development
  2. Redox Regulation of the Epigenetic Landscape in Cancer:
     DNA Methylation and Beyond
  3. The Control of Histone Methylation and Gene Expression by Oxidative Stress, Hypoxia and Metals
  4. Cardiovascular Risk Factors Impact the Endothelium via Epigenetic Regulation of the Redox State

Friday, November 18
OXIDATIVE STRESS IN NEURODEGENERATIVE DISEASES
  1. Oxidative Stress and Parkinson's: Linking Alpha-Synuclein to Epigenetics
  2. Mitochondrial Abnormalities and Oxidative Stress in Alzheimer's Disease
  3. Mitochondrial Dysfunction and Oxidative Stress in Astrocytes: A Role in Amyotrophic Lateral Sclerosis
  4. Nitrosative Signaling in Cell Death and Cell Survival

Saturday, November 19
MITOCHONDRIA, REDOX METABOLISM AND CANCER BIOLOGY
  1. Genetic Insights into Warburg Effect Reveal Tumor Promoting Function of UCP2
  2. p53, Aerobic Metabolism and Cancer
  3. Mitochondrial Morphology - Critical for Redox Signaling
  4. SIRT6, A Master Regulator of Glucose Homeostasis and Cancer Metabolism

Sunday, November 20
CROSSTALK BETWEEN NO AND H₂S SIGNALING
  1. Chemical Interactions of Hydrogen Sulfide with Nitrogen Oxides
  2. H₂S Regulation of NO Bioavailability: Mechanisms and Cytoprotective Effects
  3. The Search for an Endothelium-Derived Hyperpolarizing Factor - from NO to H₂S
  4. Hydrogen Sulfide and Nitric Oxide Interactions in Inflammation
Plenary Session Topics

Wednesday, November 17
CELEBRATING 25 YEARS OF FREE RADICAL BIOLOGY AND MEDICINE
1. Flavonoids in 2010: From Reducing Properties to Biological Functions
2. Free Radicals in Biology and Medicine: Good, Unexpected, and Uninvited Friends
3. A Diet for Health and Longevity

Thursday, November 18
REDOX SIGNALING IN THE PATHOGENESIS OF CARDIOVASCULAR DISEASE
1. Role of NOS in Cardiac Oxidative Stress and Pathologic Remodeling
2. Nox Enzymes and the Development of Heart Failure
3. Regulation of Thioredoxin-1 in Endothelial Cells
4. Redox Regulation of Class II HDACs and Cardiac Hypertrophy

Friday, November 19
ROLE OF MITOCHONDRIA AND REACTIVE SPECIES IN STEM CELL BIOLOGY
1. Mitochondrial and Redox Regulation of Stem Cell Biology
2. Nitric Oxide-Cyclic GMP Signaling in Stem Cell Differentiation
3. Pluripotent Stem Cells and Mitochondrial Remodeling
4. Maintaining Stem Cell Fate During Drosophila Hematopoiesis

Saturday, November 20
BIOCHEMISTRY AND PATHOLOGY OF REACTIVE LIPID SPECIES
1. Systems Approaches to Establishing the Relationship Between Protein Modification and Cellular Responses by Lipid Electrophiles
2. Protein Bound HNE as a Ligand of LOX-1
3. Inflammation Related Gene Expression by Lipid Oxidation Derived Products in the Progression of Atherosclerosis
4. Activation of Stress Signaling Pathways by Oxidized and Nitrated Lipids

Sunday, November 21
NITRIC OXIDE AND OXYGEN: CO-CONSPIRATORS FOR LIFE
1. Nitric Oxide Interactions with Mitochondrial Cytochrome c and Cytochrome Oxidase
2. Oxygen-Dependent Regulation of Nitric Oxide Production
3. Recent Insights into the Biological Signaling Properties of Sodium Nitrite
4. Nitric Oxide Levels and Adaptation to High Altitude Hypoxia
Plenary Session Topics

Thursday, November 19

**SIGNALLING AT MEMBRANE MICRODOMAINS: ALL REDOX IS LOCAL**

1. Redox Signalsomes in Membrane Lipid Raft Clusters of Endothelial Cells
2. Circulating Cardiovascular Disease Risk Factors and Signaling in Endothelial Caveolae
3. Roles of Lipid Rafts and Redox in Regulating TNF Signaling and Cell Death
4. Cholesterol-Rich Microdomains as Mediators of Signal Transduction in Cancer

Friday, November 20

**OXIDATIVE DAMAGE TO DNA, REPAIR, CLINICAL RELEVANCE**

1. Targeting of DNA Repair Proteins to the Mitochondria Effects a Phenotypic Change
2. Mechanisms of DNA Damage in Premature Aging: Insights from Xeroderma Pigmentosum Type D
3. Incorporation of Exogenous 8-oxodG into DNA in Cells in Culture and in Mice
4. Oxidative DNA Damage in Humans, Environmental and Genetic Factors of Importance and Relation to Development of Diseases

Saturday, November 21

**PARADOXICAL ROLES OF OXIDANTS AND ANTIOXIDANT ENZYMES IN METABOLISM AND DISEASES**

1. Role of Nox Proteins in Vascular Disease
2. Protective Role of Reactive Oxygen Species in Pancreatic Beta Cells
3. Antioxidant Enzymes and Diabetes: Foes or Friends
4. Pros and Cons of Antioxidant Nutrients in Human Cancer Prevention

**ASCORBIC ACID: NEW DISCOVERIES FOR AN OLD VITAMIN**

1. Vitamin C Function in the Brain: Vital Role of the Ascorbate Transporter, SVCT2
2. Vitamin C as a Cancer Therapeutic Agent: A Matter of Concentration and H$_2$O$_2$ Production
3. Vitamin C and the Regulation of HIF-1: Impact on Cell Survival in Inflammation and Cancer

**REDOX, RECIPES AND FOOD FOR THOUGHT**

1. Nutritional Strategies to Defuse Weapons of Mass Inflammation
2. Combat Rations, Redox in a Pouch: Antioxidant Systems for Both Food Functionality and Physiological Effectiveness
3. Personalized Medicine First-Hand: Overcoming Secondary Progressive MS

Sunday, November 22

**ROS, REDOX REGULATION, AND REDOX IMAGING IN CANCER**

1. Hyperactivation of Akt and Oxidative Apoptosis in Cancer Cells
2. Redox Magnetic Resonance Imaging: Monitoring Tumor Redox Status and Molecular/Biochemical Profiling with MRI
3. Antioxidant Enzymes as Potential Targets for Cancer Cell Killing
4. Regulating the Regulator: MnSOD and Cancer
Plenary Session Topics

Thursday, November 20
REDOX-SENSITIVE MOLECULAR TRIGGERS CONTROLLING CELLULAR FATE AND FUNCTION

1. Mitochondria as Signaling Organelles During Stress
2. Nrf2 Signaling in Oxidative Stress and Cell Survival
3. Oxidants and Antioxidants in Control of Cell Cycle Progression
4. Ageing and Disease: the Role of ROS-Mediated FOXO Regulation

Friday, November 21
DEGRADATION OF OXIDIZED PROTEINS: A TRIBUTE TO EARL STADTMAN

1. The Degradation of Oxidized Proteins Protects Against Oxidative Stress
2. Proteasomes and Immunoproteasomes in the Degradation of Oxidized Proteins, and in Aging
3. Protein Maintenance Failure in Cellular Aging
4. Oxidative Protein Folding in the Early Secretory Pathway

Saturday, November 22
METABOLIC SYNDROME AND REDOX BIOLOGY

1. Adiponectin — A New Link between Inflammation, Liver Disease, and the Metabolic Syndrome
2. The Role of Lipid-Derived Electrophiles in Liver Disease Associated with the Metabolic Syndrome
3. Control of Muscle Mitochondria by Insulin: Akt2-mtNos Pathway and the Metabolic Syndrome
4. Beta Cell Death by Nitric Oxide: Is it Necrosis, Apoptosis or Both?

Sunday, November 23
NOVEL REDOX SIGNALING IN CARDIOVASCULAR PATHOPHYSIOLOGY

1. Cardiovascular Actions of Hydrogen Sulfide
2. Pathological Role of Nox Proteins
3. Nitrite Modulates Mitochondrial Function During Ischemia/Reperfusion
4. Redox Regulation of Protein Kinase G
5. Cyclophilin A: A Novel Mediator of Cardiovascular Pathogenesis
6. Redox Control of Central Neuro-Cardiovascular Function and Disease
Plenary Session Topics

Thursday, November 15  THE CHEMICAL BIOLOGY OF REDOX PROCESSES
1. Selectivity in Biological Responses to Nitric Oxide
2. Endosomal Regulation of NADPH Oxidases in Cell Signaling
3. Redox Regulation of Ras Superfamily GTPases
4. Lipid Oxidation Products and Protein Damage: Analysis and Consequences

Friday, November 16  FREE RADICALS, OXIDANTS AND ANTIOXIDANTS IN THE NEGLECTED DISEASES: FOCUS ON TRYPANOSOMIASIS AND LEISHMANIASIS
2. Ascorbate Biosynthesis and Function in Trypanosomatids
3. Structural Studies of Trypanosomal and Mycobacterial Peroxiredoxins
4. Apoptotic Mimicry: A New Leishmanial Escape Mechanism from the Microbicidal Activity of Macrophages

Saturday, November 17  REGULATION OF OXIDATIVE STRESS AND INFLAMMATION: FOCUS ON HEME OXYGENASE-1 AND NITRIC OXIDE
1. The Many Faces of Heme Oxygenase-1
2. Mechanisms of Anti-Inflammatory Effects of Heme Oxygenase-1
3. Regulation of T-helper Cell Expansion During Inflammation: Interactive Role of Nitric Oxide and Superoxide
4. Regulation of L-arginine - Availability by Myeloid Cells: Effects on T-cell Function

Sunday, November 18  FUNCTIONAL AND BIOLOGICAL ACTIVITIES OF NATURAL AND SYNTHETIC ANTIOXIDANTS
1. Molecular Mechanisms By Which Tocopherol Transfer Protein Facilitates Hepatic Tocopherol Secretion
2. PXR- and EpRE-mediated Gene Expression by Dietary Antioxidants
3. A New Role for Vitamin C in Immune Cell Function and Its Impact on the Resolution of Inflammation
5. Design and Biodistribution of Mn Porphyrin-based Therapeutics for Oxidative Stress
6. Scavenging Peroxynitrite and Carbonate Radical by Metalloporphyrins In Vitro and In Vivo
7. Superoxide Dismutase Mimetics and Peroxynitrite Decomposition Catalysts as Adjuncts to Opiates in Pain
8. Nitrones and Age-Related Diseases