

**WEDNESDAY DECEMBER 3<sup>rd</sup>**

**Session 1: NOX OXIDASES**

**Chairs:** Grant Drummond (Victoria) & Hitesh Peshavariya (Victoria)

**17:30** Ralf Brandes (Germany; International Invited Speaker)  
*Vascular Nox NADPH Oxidases: Important For Physiology And Regeneration*

**18:20** Jennifer Wilkinson-Berka (Victoria)  
*Therapeutic Potential Of Specific Nox Isoform Inhibition For Vascular And Neuro-Glial Injury In Ischemic Retinopathies*

**18:40** Stephen Gray (Victoria)  
*The Role Of Nox-Derived Oxidative Stress In Diabetic Vascular Complications*

**19:00** Nora Hakami (Victoria)  
*Protective Role Of NADPH Oxidase 4 In Human Endothelial Progenitor Cells*

**19:15** Eunice To (Victoria)  
*Nox2 Oxidase-Derived Reactive Oxygen Species (ROS) In Endosomes Suppresses Immunity To TLR7*

**19:30-21:00** Welcome Reception

**THURSDAY DECEMBER 4<sup>th</sup>**

**Session 2: MYELOPEROXIDASES**

**Chairs:** Shane Thomas (NSW) & Tony Kettle (New Zealand)

- 8:40** Clare Hawkins (NSW)  
*Role Of The Myeloperoxidase-Derived Oxidant Hypothiocyanous Acid (HOSCN) In Thiol Modification And Macrophage Dysfunction*
- 9:00** Sophie Maiocchi (NSW)  
*Regulation Of Myeloperoxidase NO Oxidase Activity By Pharmacological Agents: Novel Biochemical Basis For NO Preservation By Phenolics And Nitroxides (Tempol)*
- 9:15** Benjamin Rayner (NSW)  
*The Myeloperoxidase-Derived Oxidant Hypochlorous Acid Promotes The Inflammatory Response And Extracellular Trap Formation In Macrophages: A Potential Mechanism Of Atherosclerotic Lesion Development*
- 9:30** Bronwyn Brown (NSW)  
*Role Of Myeloperoxidase In The Modulation Of Cellular Lysosomal Cathepsin Protease Function: A Contributing Factor To Macrophage Dysfunction In Atherosclerosis?*
- 9:45** Jessica Macer-Wright (NSW)  
*Chlorinated Nucleosides – Cause Or Consequence Of Inflammatory Disease?*

**10:00-10:30** Morning tea

**Session 3: REDOX MECHANISMS IN DIABETES, HYPERTENSION AND END ORGAN DAMAGE**

**Chairs:** Josephine Forbes (Queensland) & David van Reyk (NSW)

- 10:30** Rebecca Ritchie (Victoria)  
*Reactive Oxygen Species (ROS) And Diabetic Cardiomyopathy*
- 10:50** Anne Barden (Western Australia)  
*The Effects Of Red Wine On Blood Pressure*
- 11:10** Judy De Haan (Victoria)  
*Oxidative Stress, Inflammation And Cardiovascular Disease In The Diabetic Milieu: Evidence From Glutathione Peroxidase-1 (GPx1) Deficient Mice*
- 11:30** Elyse Di Marco (Victoria)  
*Deficiency Of Nox4-Derived ROS Promotes A Pro-Atherogenic Phenotype In Mouse Aortic Smooth Muscle Cells Exposed To High Glucose*
- 11:45** Jair Kwan (NSW)  
*A Novel Selenium Sugar Enhances Wound Closure And Improves Microvascular Perfusion: Implications For Diabetic Wound Healing*
- 12:00** Thomas Hambly (NSW)  
*SAA Stimulates Macrophage-Mediated Kidney Damage Through An NF- $\kappa$ B-Dependent Pathway*

**12:15-14:00** Lunch and poster viewing

**Session 4: MITOCHONDRIAL ROS IN CELLULAR DAMAGE & DISEASE**

**Chairs:** Alfons Lawen (Victoria) & Steven Gieseg (New Zealand)

**14:00** Ashley Bush (Victoria)

*Iron in Alzheimer's disease and Parkinson's disease*

**14:20** Mike Berridge (New Zealand)

*Mitochondrial Respiration In Cancer: Mitochondrial Genome Acquisition From The Microenvironment Facilitates Tumorigenesis And Metastasis By Tumour Cells Lacking Mitochondrial DNA*

**14:40** Jiri Neuzil (Queensland)

*Remodelling Of Respiration In Tumour Cells Following Acquisition Of Mitochondrial DNA*

**15:00** Mark Hampton (New Zealand)

*Mitochondrial Redox Changes During TNF-Mediated Necroptosis*

**15:15** Dominic Love (NSW)

*The Myeloperoxidase-Derived Oxidant Hypothiocyanous Acid (HOSCN) Induces Mitochondrial Dysfunction In Macrophages*

**15:30-16:00** Afternoon tea

**Session 5: REDOX CHEMISTRY & DRUG DISCOVERY**

**Chairs:** Mark Hampton (New Zealand) & Ralf Brandes (Germany)

**16:00** Uta Wille (Victoria)

*Damage Of Biological Molecules By Environmental Free Radical Oxidants*

**16:20** Chris Easton (ACT)

*A Radical Approach To Regulating Human Peptide Hormone Levels*

**16:40** Luke Carroll (NSW)

*Selenium-Containing Compounds As Catalytic Oxidant Scavengers: Determination Of Selenoxide Reduction Rates By Thiols*

**16:55** Angelica Merlot (NSW)

*HSA Increases The Uptake And Anti-Cancer Activity Of The Redox Active Drug, Dp44mT*

**17:15-18:15** Poster viewing and Drinks

**19:00-23:00** Conference dinner

**FRIDAY DECEMBER 5<sup>th</sup>**

**Session 6: REDOX MECHANISMS IN TISSUE REMODELLING & CANCER**

**Chairs:** Barbara Kemp-Harper (Victoria) & Des Richardson (NSW)

- 8:40** Mark DeNichilo (Adelaide)  
*Peroxidase Enzymes As Novel Regulators Of Collagen Extracellular Matrix Biosynthesis*
- 9:00** Hitesh Peshavariya (Victoria)  
*NADPH Oxidase-4 Mediates Fibrogenic Response To Ocular Injury*
- 9:15** Georg Degendorfer (NSW)  
*Peroxy-nitrous Acid-Mediated Oxidation Of Elastin Affects Structure And Function*
- 9:30** Des Richardson (NSW)  
*Novel Redox-Active Iron Chelators Inhibit EGFR Signalling Via Their Effects On The Metastasis Suppressor, NDRG1.*
- 9:45** Ian Harrison (Victoria)  
*Reactive Oxygen Species (ROS) Promote Prostate Tumour Development In Mice: Potential Role Of Endosomal Nox2-Containing NADPH Oxidase*

**10:00-10:30** Morning tea

**Session 7: SFRR(A) DISTINGUISHED SERVICE AWARD LECTURE**

**Chair:** Clare Hawkins (NSW)

**10:30** Tony Kettle (New Zealand; Distinguished Service Awardee)

**Session 8: OXIDATIVE MECHANISMS IN NEURODEGENERATION**

**Chair:** Chris Sobey (Victoria) & Carli Roulston (Victoria)

- 11:20** Melinda Fitzgerald (Western Australia)  
*Strategies To Reduce Oxidative Stress And Preserve Structure And Function During Secondary Degeneration Following Neurotrauma*
- 11:40** Peter Crouch (Victoria)  
*Improved Locomotor Function And Survival Of ALS Model Mice With Increased Levels Of Mutant Superoxide Dismutase 1*
- 12:00** Priscilla Yousef (NSW)  
*The Early Pathogenesis Of Alzheimer's Disease Is Characterised By Oxidative Damage And Increased HO-1 Activity*
- 12:15** Devy Deliyanti (Victoria)  
*Dual Nox1/Nox4 Enzyme Inhibition Reduces Inflammation And Microglial Activation In The Ischemic Retina*

**12:30-14:00** Lunch and AGM (13:00-14:00)

**Session 9: REDOX SIGNALLING**

**Chair:** Stavros Selemidis (Victoria) & Phil Eaton (United Kingdom)

**14:00** Graham Lamb (Victoria)  
*Oxidative Changes To Contractile Function In Skeletal And Cardiac Muscle: Protecting From Damage And Aiding Performance*

**14:20** Katrin Schroeder (Germany)  
*Nox4: A Central Mediator Of Cellular Differentiation*

**14:40** Tony Tiganis (Victoria)  
*Hepatic Oxidative Stress Promotes Selective Insulin Resistance & Obesity By Inactivating PTPs*

**15:00** Steven Giese (New Zealand)  
*NOX/p47phox Activation And Oxidative Stress In Acute Macrophage Necrosis*

**15:15** Sumit Sahni (NSW)  
*The Novel Redox Active Iron Chelator, Dp44mt, Activates The AMP-Activated Protein Kinase (AMPK)-Dependent Energy Homeostasis Pathway In Cancer Cells*

**15:30-16:00** Afternoon tea

**Session 10: OXIDATION, INFLAMMATION & CARDIOVASCULAR/RESPIRATORY DISEASE**

**Chair:** Andrew Bulmer (Queensland) & Alyson Miller (Victoria)

**16:00** Paul Witting (NSW)  
*Oxidative Damage to Cardiac Myoglobin Following Acute Myocardial Infarct*

**16:20** Ross Vlahos (Victoria)  
*Targeting Oxidative Stress For The Treatment Of COPD*

**16:40** Mike Davies (NSW)  
*Modulation Of Damage By Myeloperoxidase-Derived Oxidants*

**17:00** Jianmei Li (NSW)  
*A Novel Protective Role For FXRD1 Against Myocardial Fibrosis*

**17:15** Keshia Hendricks (Victoria)  
*Influenza A Virus (IAV) Activates Endosomal Nox2 Oxidase In Endothelial Cells*

**17:30-18:30** Drinks

**SATURDAY DECEMBER 6<sup>th</sup>**

**Session 11: DIETARY ANTIOXIDANTS & ENDOGENOUS REDOX HOMEOSTASIS SYSTEMS**

**Chair:** Roland Stocker (NSW) & Judy De Haan (Victoria)

**8:50** Christine Winterbourn (New Zealand)

*Mechanisms And Consequences Of Peroxiredoxin Oxidation*

**9:10** Greg Anderson (Queensland)

*The Role Of The Copper-Dependent Ferroxidases Hephaestin And Ceruloplasmin In Body Iron Homeostasis*

**9:30** Connie Boon (Queensland)

*Bilirubin Protects From Myeloperoxidase-Induced Hypochlorous Acid Mediated Oxidation: A Mechanism To Explain Protection From Atherosclerosis*

**9:45** Michael Huang (NSW)

*Mechanism Involved In The Blunted Anti-Oxidant Response In The Frataxin-Deficient Heart: Increased NRF2 Degradation Via Both The KEAP1 And GSK3B Pathway*

**10:00-10:30** Morning tea

**Session 12: OXIDANT, INFLAMMATION & CARDIOVASCULAR DISEASE**

**Chair:** Gemma Figtree (NSW) & Ghassan Maghzal (NSW)

**10:30** Phil Eaton (United Kingdom; International Invited Speaker)

*Protein Thiols And Their Roles In Oxidant Sensing And Signalling*

**11:20** Roland Stocker (NSW)

*Light In The Dark – A Novel Path For The Metabolism Of Tryptophan To N-Formyl-Kynurenine By Indoleamine 2,3-Dioxygenase 1*

**11:40** Jeff Coombes (Queensland)

*Effect Of Atorvastatin On Oxidative Stress In Chronic Kidney Disease: A Substudy Of The Lipid Lowering And Onset Of Renal Disease (LORD) Trial*

**11:55** Owen Tang (NSW)

*Silencing Of FXD1 Uncouples eNOS In Human Umbilical Vein Endothelial Cells*

**12:10** Belal Chami (NSW)

*Serum Amyloid A Receptor Blockade And Incorporation Into High Density Lipoprotein Modulates Its Pro-Inflammatory And Pro-Thrombotic Activities In Vascular Endothelial Cells*

**12:25** Awards ceremony and meeting close

**12:30 – 13:30** Lunch