



## 5<sup>th</sup> Meeting of the Canadian Oxidative Stress Consortium Montréal, Québec

*En collaboration / In Collaboration:*

McGill University  
Université du Québec à Montréal  
Université de Montréal  
Concordia University



**May 3-6, 2007**

Université du Québec à Montréal  
Amphithéâtre (Room SH-2800)  
Faculté des sciences, Pavillon Sherbrooke (SH)  
200, rue Sherbrooke Ouest, Montréal (Québec) Canada

*Conférenciers plénières / Keynote Speakers*

**Wulf Dröge, Immunotec**  
**Mark Hannink, University of Missouri-Columbia**

*Comité scientifique / Organizers*

Prem Ponka, McGill University  
Diana Averill, Université du Québec à Montréal  
Kostas Pantopoulos, McGill University  
Volker Blank, McGill University  
Tom Chan, Université de Montréal  
Ann English, Concordia University

*Coordination and Secretariat*

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**5<sup>th</sup> Meeting of the Canadian Oxidative Stress Consortium, Montréal, Québec  
May 3-6, 2007**

**Jeudi le 3 mai 2007 / Thursday, May 3, 2007**

**Pavillon 200 Sherbrooke Ouest – Entrée principal / Main Entrance**

15h00 **Inscription / Registration**

**Pavillon 200 Sherbrooke Ouest – Salle / Room Agora HQ**

**Le mot de bienvenue / Opening Remarks**

17h00 **Rima Rozen**, Associate Vice-Principal (McGill University, Montréal, Canada)

**Conférencier plénière / Keynote Speaker**

**Chair: Kostas Pantopoulos** (McGill University, Montréal, Canada)

17h15 **Wulf Dröge** (Immunotec, Vaudreuil-Dorion, Québec, Canada)  
*"Oxidative stress as a cause of aging: How good is the evidence?"*

**Session 1: Oxidative stress and cancer**

**Chair: Doug M. Templeton** (University of Toronto, Toronto, Canada)

18h20 **Thomas Massey** (Queen's University, Kingston, Canada)  
*"Oxidative stress in drug-induced lung damage and pulmonary chemical carcinogenesis."*

18h40 **Brian B. Hasinoff** (University of Manitoba, Winnipeg, Canada)  
*"Reductive and oxidative activation mechanisms of the cytotoxicity of the diazoparaquinone antitumor antibiotic kinamycin F."*

19h00 **L. John Hoffer** (McGill University, Montréal, Canada)  
*"Cancer treatment by intravenous vitamin C."*

**Trainee Presentations**

19h20 **Ying Liu** (University of Toronto, Ontario, Canada)  
*"Initiation of caspase-independent death in mouse mesangial cells by Cd2+: Involvement of p38, CaMK-II and actin disruption."*

19h30 **Zaynab Nouhi** (McGill University, Montréal, Canada)  
*"Implication of NRF3 (NF-E2-related factor 3) transcription factor in the response to oxidative stress."*

19h40 **VIN FROMAGE / WINE AND CHEESE – Salle / Room SH-4800**

**Vendredi le 4 mai 2007 / Friday, May 4, 2007**

**Pavillon 200 Sherbrooke Ouest – Amphithéâtre (Salle / Room SH-2800)**

**Session 2: Oxidative stress in the cardiovascular system**

**Chair: Barbara F. Hales** (McGill University, Montréal, Canada)

8h30 **Ernesto L. Schiffrin** (McGill University, Montréal, Canada)  
*"Oxidative stress and hypertension."*

8h50 **Naranjan S. Dhalla** (University of Manitoba, Winnipeg, Canada)  
*"Role of oxidative stress in remodeling of subcellular organelles in the heart."*

9h10 **Yu-Jing Gao** (McMaster University, Hamilton, Canada)  
*"Modulation of vascular function by reactive oxygen species (ROS): A story with perivascular adipose tissue (PVAT)."*

9h30 **Manuela M. Santos** (Université de Montréal, Montréal, Canada)  
*"Iron metabolism and Hfe deficiency: Implications for doxorubicin-induced cardiotoxicity."*

**Trainee Presentations**

9h50 **Suh Young Jeong** (McGill University, Montréal, Canada)  
*"Iron regulates ferroportin1 localization to lipid rafts."*

10h00 **Marc Mikhael** (McGill University, Montréal, Canada)  
*"Nitric oxide (NO+) enhances ferritin synthesis by both IRP-dependent and -independent mechanisms."*

10h10 **PAUSE CAFÉ / COFFEE BREAK – Salle / Room SH-4800**

**Pavillon 200 Sherbrooke Ouest – Amphithéâtre (Salle / Room SH-2800)**

**Session 3: Oxidative stress and development**

**Chair: Sylvain Chemtob** (Université de Montréal, Montréal, Canada)

10h40 **Jean-Claude Lavoie** (Université de Montréal, Montréal, Canada)  
*"Neonatal oxidative stress: Perturbation of the energetic metabolism until adulthood."*

11h00 **Barbara F. Hales** (McGill University, Montréal, Canada)  
*"Oxidative stress as a biomarker of developmental toxicity"*

11h20 **James K. Friel** (University of Manitoba, Winnipeg, Canada)  
*"Evidence of oxidative stress in healthy full-term infants."*

11h40 **Po-Yin Cheung** (University of Alberta, Edmonton, Canada)  
*"Oxygen: The elixir or poison of life – A neonatologist's perspective."*

12h00 **Tomas Zima** (Charles University, Prague, Czech Republic)  
*"AGE's, RAGE and their clinical significance."*

12h20 **Albert van der Vliet** (University of Vermont, Burlington, U.S.A.)  
*"NADPH oxidase-mediated signaling in response to airway epithelial infection and injury."*

12h40 **DÎNER / LUNCH BREAK – (ne sera pas servi / will not be served)**

**Pavillon 200 Sherbrooke Ouest – Amphithéâtre (Salle / Room SH-2800)**

**Session 4: Nitric oxide**

**Chair: Sabah N.A. Hussain** (McGill University, Montréal, Canada)

14h30 **Des R. Richardson** (University of Sydney, Sydney, Australia)  
*"Nitric oxide, glutathione and iron transport from cells: Identification of an active transport mechanism by MRP1."*

14h50 **Ann M. English** (Concordia University, Montréal, Canada)  
*"Hemoglobin, nitrosothiols, nitrite and blood flow: Mechanistic insights."*

15h10 **Charles H. Graham** (Queen's University, Kingston, Canada)  
*"Nitric oxide signaling and cancer: Therapeutic potential of nitric oxide mimetics."*

15h30 **Pedro D'Orleans-Juste** (Université de Sherbrooke, Sherbrooke, Canada)  
*"New roles of the three nitric oxide synthases in the murine cardiovascular system."*

15h50 **Sylvain Chemtob** (Université de Montréal, Montréal, Canada)  
*"Mechanisms of hypercapnia-induced tissue injury: A role for nitrative stress and trans-arachidonic acids."*

16h10 **PAUSE CAFÉ / COFFEE BREAK – Salle / Room SH-4800**

**Pavillon 200 Sherbrooke Ouest – Amphithéâtre (Salle / Room SH-2800)**

**Trainee Presentations**

16h40 **Subir K. Roy Chowdhury** (University of Manitoba, Winnipeg, Canada)  
*"Effects of oxidized or glycated low density lipoproteins on mitochondrial function in porcine aortic endothelial cells."*

16h50 **Elisabeth L. Pagé** (Université Laval, Québec City, Canada)  
*"Implication of ascorbate and hydrogen peroxide in ANG II-mediated stabilization of hypoxia inducible factor-1 $\alpha$ ."*

**Session 5: Cell signalling**

**Chair: Darren E. Richard** (Laval University, Québec City, Canada)

17h00 **Jacques Huot** (Université Laval, Québec City, Canada)  
*"Regulation of the oxidative stress response by DAP-kinase mediated phosphorylation of tropomyosin-1 downstream of the ERK pathway in endothelial cells."*

17h20 **Sebastian Mueller** (Harvard University, Boston, U.S.A.)  
*"Cell sense decrements of oxygen but not hypoxia per se: Role of the dynamic HIF1/PHD feed-back loop"*

17h40 **Louise M. Winn** (Queen's University, Kingston, Canada)  
*"Benzene-initiated oxidative stress: Effects on embryonic c-Myb signalling"*

18h00 **Doug M. Templeton** (University of Toronto, Toronto, Canada)  
*"Cadmium toxicology: Multiple pathways to cell proliferation and cell death."*

18h20 **David P. Josephy** (University of Guelph, Guelph, Canada)  
*"Human glutathione transferase theta 1-1 and the bioactivation of ethylene dibromide."*

**Samedi le 5 mai 2007 / Saturday, May 5, 2007**

**Pavillon 200 Sherbrooke Ouest – Amphithéâtre (Salle / Room SH-2800)**

**Session 6: Oxidative stress and therapeutic aspects**

**Chair: L. John Hoffer** (McGill University, Montréal, Canada)

- 8h30 **Kenneth B. Storey** (Carleton University, Ottawa, Canada)  
*"Dealing with oxygen radicals: Lessons from mammalian hibernators."*
- 8h50 **Jean-Claude Tardiff** (Université de Montréal, Montréal, Canada)  
*"Recent clinical results with a novel antioxidant."*
- 9h10 **Christine Des Rosiers** (Université de Montréal, Montréal, Canada)  
*"4-Hydroxynonenal bound to thiol proteins (4-HNE-P): A marker of oxidative stress-related events in heart diseases?"*
- 9h30 **Marie Trudel** (Institut de recherches cliniques de Montréal, Montréal, Canada)  
*"Long term correction of thalassemia by combined minimal myelosuppression and cellular requirements."*

**Trainee Presentations**

- 9h50 **Karin Fink** (Université de Montréal, Montréal, Canada)  
*"NADPH oxidases in respiratory syncytial virus infection of airway epithelial cells."*
- 10h00 **Rhea Mehta** (University of Toronto, Toronto, Canada)  
*"Oxidative stress hepatotoxic mechanisms of iron versus copper determined by the cytoprotective specificity of various agents."*
- 10h10 **PAUSE CAFÉ / COFFEE BREAK – Salle / Room SH-4800**

**Pavillon 200 Sherbrooke Ouest – Amphithéâtre (Salle / Room SH-2800)**

**Session 7: Oxidative stress in cell metabolism and function**

**Chair: Marie Trudel** (Institut de recherches cliniques de Montréal, Montréal, Canada)

- 10h40 **Jyoti Pande for Ashok K. Grover** (McMaster University, Hamilton, Canada)  
*"Caloxins – Selective inhibitors of plasma membrane Ca<sup>2+</sup> pumps."*
- 11h00 **Paul A. Walton** (University of Western Ontario, London, Canada)  
*"Restoration of peroxisomal catalase import."*
- 11h20 **Richard J. Wagner** (Université de Sherbrooke, Sherbrooke, Canada)  
*"Oxidative damage to cytosine in DNA: Chemistry, detection, and potential biological consequences."*
- 11:40 **DÎNER / LUNCH BREAK – POSTER SESSION – Salle / Room SH-4800**

**Pavillon 200 Sherbrooke Ouest – Amphithéâtre (Salle / Room SH-2800)**

14h00 **Claudia Zwingmann** (Université de Montréal, Montréal, Canada)  
*"Metabolic changes and oxidative stress in hepatocellular apoptosis and necrosis using multinuclear NMR studies and <sup>13</sup>C isotopomer analysis."*

14h20 **Peter J. O'Brien** (University of Toronto, Toronto, Canada)  
*"Using vitamins to probe the cellular oxidative stress pathways induced by toxins."*

**Trainee Presentations**

- 14h40 **André Tanel** (Université du Québec à Montréal, Montréal, Canada)  
*"P38 and ERK mitogen-activated protein kinases mediate acrolein-induced apoptosis in Chinese hamster ovary cells."*
- 14h50 **Bill Andriopoulos** (McGill University, Montréal, Canada)  
*"Soluble Hemojuvelin is a positive regulator of hepcidin expression."*
- 15h00 **PAUSE CAFÉ / COFFEE BREAK – Salle / Room SH-4800**

**Pavillon 200 Sherbrooke Ouest – Amphithéâtre (Salle / Room SH-2800)**

**Session 8: Gene regulation**

**Chair: Tom Chan** (Université de Montréal, Montréal, Canada)

- 15h30 **James Koropatnick** (University of Western Ontario, London, Canada)  
*"Metallothionein in glucocorticoid receptor and NF- $\kappa$ B function."*

15h50 **Dana Crawford** (Albany Medical College, Albany, U.S.A.)  
*"Adapt oxidative and nitrosative stress-response genes."*

16h10 **Darren E. Richard** (Université Laval, Québec City, Canada)  
*"Vascular implications of hypoxia-inducible factors."*

16h30 **Nathalie Grandvaux** (Université de Montréal, Montréal, Canada)  
*"Involvement of oxidative stress in innate antiviral response: Source and function."*

16h50 **Robert M. Tanguay** (Université Laval, Québec, Québec)  
*"Regulation of longevity and resistance to oxidative stress by small heat shock proteins"*

**Conférencier plénière / Keynote Speaker**

**Chair: Volker Blank** (McGill University, Montréal, Canada)

17h10 **Mark Hannink** (University of Missouri-Columbia, Columbia, U.S.A.)  
*"Keap1: A molecular thermostat for redox homeostasis."*

**200, rue Sherbrooke Ouest, Faculté des sciences, Pavillon Sherbrooke (SH), Salle / Room SH-4800**

19h00 **BANQUET DU SAMEDI SOIR  
SATURDAY EVENING BANQUET (INFORMAL)**

**Dimanche le 6 mai 2007 / Sunday, May 6, 2007**

**Pavillon 200 Sherbrooke Ouest – Amphithéâtre (Salle / Room SH-2800)**

**Trainee Presentations**

- 8h30 **Erin L. Seifert** (University of Ottawa, Ottawa, Canada)  
*"Skeletal muscle mitochondria respiring under resting conditions generate matrix hydrogen peroxide when metabolizing high but not low levels of fatty acids."*
- 8h40 **Dipti Bhoiwala** (Albany Medical College, Albany, New York)  
*"Redox regulated Adapt78 (RCAN1) in cell signaling and macrophage function."*

**Session 9: Oxidative stress, CNS and motor function**

**Chair: Manuela M. Santos** (Université de Montréal, Montréal, Canada)

- 8h50 **Ellis Cooper** (McGill University, Montréal, Canada)  
*"Mild elevations in mitochondrial ROS induce long-lasting inactivation of neuronal nicotinic acetylcholine receptors and long-term depression of fast nicotinic synaptic transmission in sympathetic ganglia."*
- 9h10 **Samuel David** (McGill University, Montréal, Canada)  
*"Ceruloplasmin and the iron-homeostatic response to spinal cord injury."*

9h30 **Charles Ramassamy** (INRS-IAF, Montréal, Canada)  
*"Emerging role of polyphenolic compounds in the treatment of neurodegenerative diseases."*

9h50 **PAUSE CAFÉ / COFFEE BREAK – Salle / Room SH-4800**

**Pavillon 200 Sherbrooke Ouest - Amphithéâtre (Salle / Room SH-2800)**

10h10 **Sabah N.A. Hussain** (McGill University, Montréal, Canada)  
*"Oxidative and nitrosative protein modifications in the ventilatory and limb skeletal muscles."*

10h30 **Hyman M. Schipper** (McGill University, Montréal, Canada)  
*"Heme oxygenase-1 in brain aging and neurodegeneration."*

10h50 **Peter G. Wells** (University of Toronto, Toronto, Canada)  
*"Free radical determinants of neurodegenerative disease."*

**Cérémonie de clôture et remis des prix pour les meilleurs présentations orales et affiches des "Trainees"**

**Closing Remarks and Announcement of Trainee Presentation and Poster Awards**

- 11h10 **Peter O'Brien** (University of Toronto, Toronto, Canada) and **Diana Averill** (Université du Québec à Montréal, Montréal, Canada)

# 5<sup>TH</sup> OSC THANKS ITS SPONSORS AND PARTNERSHIPS NOUS TENONS À REMERCIER NOS COMMANDITAIRES

## GOLD



Society for Free Radical Biology and Medicine

## SILVER



## BRONZE



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### CONTACT INFORMATION

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