The aim of the COSC is to bring together today’s leading Canadian researchers from the vast field of oxidative stress. The Oxidative Stress Consortium has held a meeting every other year, and it is the largest Canadian conference focusing on oxidative stress. Assembling scientists from this exciting field provides an opportunity for all to exchange novel ideas, provide insight into their current work, and initiate collaborations.

May 10-12, 2012
Lakehead University
Thunder Bay, Ontario

For more information, please contact:

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Email: greg.ross@nosm.ca

**Dr. Neelam Khaper**
NOSM Associate Professor
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Cell: 807-251-3118
Email: ghislaine.attema@nosm.ca

For more information, please visit:
www.nosm.ca/oxistress7
## AGENDA

**THURSDAY, MAY 10, 2012**

**8:00**  | **Registration Opens / Poster Setup**  | **Lakehead University, University Centre Agora**  
|  |  | 955 Oliver Road, Thunder Bay

**9:30 - 9:45**  | **Welcome and Opening Remarks from Dr. Greg Ross, NOSM Associate Dean, Research Dr. Ashok Grover, Professor, McMaster University, and Dr. Rui Wang, VP Research, Lakehead University**  | **ATAC, Room 1003**

| 9:45 - 10:00  | **Naif Aljuhani**  
Enhancement of menadione cytotoxicity by bicarbonate: redox cycling and a possible role for the carbonate radical in quinine cytotoxicity

| 10:00 - 10:15  | **Ashim Bagchi**  
Role of MyD88 adaptor molecule in the anti-apoptotic function of IL-10-induced cardiomyocyte survival

| 10:15 - 10:30  | **Ashley Cerqueira**  
The antioxidant resveratrol down-regulates inflammation in an *in vitro* model of *P. aeruginosa* infection of lung epithelial cells

| 10:30 - 10:45  | **Chet Holterman**  
Nox5-dependent reactive oxygen species production in human podocytes exposed to diabetic stimuli

### TRAINEE PRESENTATIONS

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**10:30 - 10:45**  | **Chet Holterman**  
Nox5-dependent reactive oxygen species production in human podocytes exposed to diabetic stimuli

**10:45 - 11:15**  | **Nutrition Break**  
**University Centre Agora**

| 11:15 - 11:30  | **Gkouvatsos Konstantinos**  
Conditional disruption of mouse HFE2 gene: maintenance of systemic iron homeostasis requires hepatic but not skeletal muscle hemojuvelin

| 11:30 - 11:45  | **Ana Ludke**  
Differential effects of Doxorubicin on Sca-1 positive cells and adult rat cardiomyocytes

| 11:45 - 12:00  | **Imran Malik**  
Tissue lipid and aldehyde concentrations in rats fed diets with differing omega-3 fatty acid content

| 12:00 - 12:15  | **Karim Michail**  
The interaction of aminocarboxylates and polyamines with aromatic amine-derived free radicals – potential modulators for aniline toxicity

| 12:15 - 12:30  | **Peipei Wang**  
The role of cystathionine gamma lysase in asthma development

**12:30 - 1:30**  | **Lunch**  
**Residence Cafeteria**

**1:30 - 2:30**  | **Northern Health Research Conference - Keynote Address**  
*Dr. Sonia Anand, McMaster University*  
The Epidemic of Diabetes among Aboriginal People in Canada: Cause and Consequences  
*All COSC participants are welcome to attend.*

**2:30 - 3:00**  | **Nutrition Break**  
**University Centre Agora**

| 3:00 - 3:20  | **Dr. Garry Shen**  
Mitochondrial dysfunction, oxidative stress and diabetic vascular complications

| 3:20 - 3:40  | **Dr. Subrata Chakrabarti**  
Oxidative stress induced DNA damage causing transcriptional and post transcriptional changes in chronic diabetic complications

| 3:40 - 4:00  | **Dr. Lingyun Wu**  
Glucose, methylglyoxal and oxidative stress in human endothelial cells

| 4:00 - 4:20  | **Dr. Ashok Grover**  
Why fruits are rich in antioxidants

| 4:20 - 4:40  | **Dr. Ebru Toksoy Oner**  
Bioactive microbial polysaccharides

| 4:40 - 5:00  | **Dr. Thomas Netticadan**  
Wild blueberry polyphenols prevent cardiomyocyte hypertrophy and cell death

| 5:00 - 5:20  | **Dr. Todd Duhamel**  
Regulation of myocardial SERCA2a protein expression by the 5’adenosine-mono-phosphate-activated protein kinase (AMPK)

**5:30**  | **Dinner & Social Evening** (Cash Bar)  
**Lakehead University, Faculty Lounge**
# AGENDA

**FRIDAY, MAY 11, 2012**

**8:00**
Registration

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Topic</th>
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<tbody>
<tr>
<td>9:00</td>
<td>Dr. Peter Backx</td>
<td>Iron-mediated elevations in oxidative stress and cardiac arrhythmias</td>
</tr>
<tr>
<td>9:20</td>
<td>Dr. Adriane Belló-Klein</td>
<td>Redox-sensitive modulation of prosurvival and proapoptotic proteins involved in cardiac remodeling induced by hyperthyroidism</td>
</tr>
<tr>
<td>9:40</td>
<td>Dr. Naranjan Singh Dhalla</td>
<td>Mechanisms of oxidative stress induced changes in Ca(^{2+})-handling by cardiomyocytes</td>
</tr>
<tr>
<td>10:00</td>
<td>Dr. Brian Hasinoff</td>
<td>The dual targeted HER1/HER2 tyrosine kinase inhibitor lapatinib strongly potentiates the cardiac myocyte damaging effects of doxorubicin</td>
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**10:00 - 11:00**
Nutrition Break

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:00</td>
<td>Dr. Elissavet Kardami</td>
<td>High molecular weight FGF-2 in chronic cardiac disease</td>
</tr>
<tr>
<td>11:20</td>
<td>Dr. Pawan Singal</td>
<td>Oxidative stress and heart failure: evolution of the idea and current understandings</td>
</tr>
<tr>
<td>11:40</td>
<td>Dr. Lorrie Kirshenbaum</td>
<td>Cross-talk between mitochondrial and ER death pathways in the heart</td>
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</tbody>
</table>

**12:00 - 1:00**
Lunch

**12:00 - 1:00**
Open Poster Viewing

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>2:10</td>
<td>Dr. Kostas Pantopoulos</td>
<td>Accelerated CCl(_4)-induced liver fibrosis in Hjv(^{-/-}) mice is associated with an oxidative burst and precocious profibrogenic gene expression</td>
</tr>
<tr>
<td>2:30</td>
<td>Dr. Michel Lebel</td>
<td>The effect of oxidative stress in the premature aging disorder Werner Syndrome</td>
</tr>
<tr>
<td>2:50</td>
<td>Dr. Grant Pierce</td>
<td>The involvement of oxidative stress in the vascular dysfunction associated with Chlamydia Pneumonia infection</td>
</tr>
</tbody>
</table>

**3:10 - 3:40**
Nutrition Break

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>3:40</td>
<td>Dr. Gurmit Singh</td>
<td>Oxidative stress and cancer pain</td>
</tr>
<tr>
<td>4:00</td>
<td>Dr. Peter Wells</td>
<td>Embryonic and fetal biochemical determinants of reactive oxygen species-mediated chemical teratogenesis and neurodevelopmental deficits</td>
</tr>
<tr>
<td>4:20</td>
<td>Dr. Karmin O</td>
<td>Regulation of kidney oxidative stress during ischemia reperfusion</td>
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<tr>
<td>4:40</td>
<td>Dr. Arno Siraki</td>
<td>Free radical metabolites of aniline-based drugs – implications for toxicity</td>
</tr>
</tbody>
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**7:00 - 10:00**
Dinner & Social Evening (Cash Bar)

- 6:00 Cocktails
- 7:00 Dinner
## AGENDA

**SATURDAY, MAY 12, 2012**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00 - 9:00</td>
<td>Registration</td>
<td>Lakehead University, University Centre Agora, 955 Oliver Road, Thunder Bay</td>
</tr>
<tr>
<td>9:00 - 9:20</td>
<td>Dr. Peter O’Brien&lt;br&gt;An oxidative stress inflammation model markedly increased the hepatotoxicity of fructose dicarbonyl metabolites, alcohols or hepatotoxic drugs: A Fenton mechanism is proposed</td>
<td>Lakehead University, Agora</td>
</tr>
<tr>
<td>9:20 - 9:40</td>
<td>Dr. Madhu Anand-Srivastava&lt;br&gt;Redox modulation of Gqα,PLCβ3-protein expression and signaling in hyperglycemia</td>
<td>Lakehead University, Agora</td>
</tr>
<tr>
<td>9:40 - 10:00</td>
<td>Dr. Richard Austin&lt;br&gt;The integrated stress response modulates cellular redox state via induction of cystathionine γ-lyase: cross-talk between the integrated stress response and thiol metabolism</td>
<td>Lakehead University, Agora</td>
</tr>
<tr>
<td>10:00 - 10:20</td>
<td>Dr. Diana Averill-Bates&lt;br&gt;The role of the endoplasmic reticulum in survival and death responses in H$_2$O$_2$-treated HeLa cells</td>
<td>Lakehead University, Agora</td>
</tr>
<tr>
<td>10:20 - 10:40</td>
<td>Nutrition Break</td>
<td>University Centre Agora</td>
</tr>
<tr>
<td>10:40 - 11:00</td>
<td>Dr. Ghassan Bkaily&lt;br&gt;Regulation of nuclear ROS by ET-1 and Ang II in human vascular smooth muscle and endothelial cells</td>
<td>Lakehead University, Agora</td>
</tr>
<tr>
<td>11:00 - 11:20</td>
<td>Dr. Ashok Srivastava&lt;br&gt;Curcumin attenuates endothelin-1- induced activation of PKB and ERK1/2 signaling as well as EGR-1 expression in vascular smooth muscle cells</td>
<td>Lakehead University, Agora</td>
</tr>
<tr>
<td>11:20 - 11:40</td>
<td>Dr. William Willmore&lt;br&gt;Nuclear factor-erythroid 2 p45 subunit-related factor 1 (Nrf1) as an understudied factor in the xenobiotic/antioxidant response</td>
<td>Lakehead University, Agora</td>
</tr>
<tr>
<td>11:40 - 12:00</td>
<td>Dr. Guangdong Yang&lt;br&gt;H$_2$S signalling in cellular senescence and aging development</td>
<td>Lakehead University, Agora</td>
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<tr>
<td>12:00 - 1:00</td>
<td>Lunch</td>
<td>University Centre Agora</td>
</tr>
<tr>
<td>12:00 - 1:00</td>
<td>Open Poster Viewing</td>
<td>University Centre Agora</td>
</tr>
<tr>
<td>1:00 - 1:20</td>
<td>Dr. Jean-Claude Lavoie&lt;br&gt;Peroxides contaminating neonatal parenteral nutrition interfere with the metabolism of DNA methylation</td>
<td>Lakehead University, Agora</td>
</tr>
<tr>
<td>1:20 - 1:40</td>
<td>Dr. Mike Czubryt&lt;br&gt;Biphasic control of cardiac PGC-1α gene expression in hypoxia</td>
<td>Lakehead University, Agora</td>
</tr>
<tr>
<td>1:40 - 2:00</td>
<td>Dr. Doug Templeton&lt;br&gt;Pleiotropic effects of cadmium: CaMK-II modulates cytoskeletal dynamics</td>
<td>Lakehead University, Agora</td>
</tr>
<tr>
<td>2:00 - 2:20</td>
<td>Dr. Hui Wang&lt;br&gt;Oxidative stress mediates Endothelin-1 expression in vascular adventitial fibroblasts</td>
<td>Lakehead University, Agora</td>
</tr>
<tr>
<td>2:20 - 2:40</td>
<td>Closing Remarks / Conference Evaluation / Wrap Up</td>
<td>Lakehead University, Agora</td>
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<td></td>
<td>Poster Teardown</td>
<td>Lakehead University, Agora</td>
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</tbody>
</table>

All oral presentations will be held at the Advanced Technology and Academic Centre (ATAC), Room 1003, unless otherwise indicated.
CONFERENCE ACCOMMODATIONS

Block reservations have been made at the following locations (please contact directly):

**DAYS INN AND SUITES**
645 Sibley Drive
Thunder Bay, ON
P7B 6Z8
Tel: 807-622-3297 / 800-225-3297 (toll free)
Rate: $98.10/night + tax (Standard Room)
Block Code: NOSM
Last Date for Guaranteed Rate: April 9, 2012

**LAKEHEAD UNIVERSITY RESIDENCE**
955 Oliver Road
Thunder Bay, ON
Rate: $30.00-35.00/night (Dorm Room) or
$100.00/night (Townhouse holds four people)
For residence booking information, please contact
Ghislaine Attema at 807-766-7509.

**DAYS INN NORTH**
1250 Golf Links Road
Thunder Bay, ON
P7B 0A1
Tel: 807-344-3297 / 800-225-3297 (toll free)
Rate: $98.10/night + tax (Standard Room)
Block Code: NOSM
Last Date for Guaranteed Rate: April 17, 2012

MAIL OR FAX YOUR COMPLETED REGISTRATION FORM WITH PAYMENT BY FRIDAY, APRIL 27, 2012, TO:

**Ghislaine Attema**
Research Coordinator
Northern Ontario School of Medicine, West Campus
955 Oliver Road
Thunder Bay, Ontario
P7B 5E1
Phone: 807-766-7509  |  Cell: 807-251-3118  |  Fax: 807-766-7311
Email: ghislaine.attema@nosm.ca  |  cosc@nosm.ca

ccoos@nosm.ca  |  www.nosm.ca/oxistress7
Please print clearly, and fax completed registration form to Ghislaine Attema, NOSM Research Coordinator, at 807-766-7311 before April 27, 2012.

First Name:                Address:                  
Last Name:                 City/Province:             
Organization:              Postal Code:               
Email:                     Phone:                    
Name to appear on your name tag: (ex. Dr. John Doe or John Doe)

REGISTRATION FEES
☐ Non-Student Fee: $200
☐ Student Fee: $100 (Registered Students and Post-Doctoral Fellows)

CONFERENCE EXTRAS (Please check all that apply.)
☐ Thursday Evening “Meet & Greet” BBQ  
  (Complimentary BBQ / Cash Bar)  
  Faculty Lounge  
  Lakehead University, Thunder Bay
☐ Friday Evening Dinner & Social  
  ($35.00 per person / Cash Bar / Limited Seating)  
  Fort William Historical Park  
  1350 King Road, Thunder Bay

ADDITIONAL INFORMATION
☐ Vegetarian  ☐ Allergies: _____________________________

I have booked my accommodations at the following location:
☐ Days Inn & Suites (Sibley Drive)
☐ Days Inn North (Golf Links Road)
☐ Lakehead University Residence
☐ Other

☐ NOSM is hosting the Northern Health Research Conference concurrently. If you are interested in participating, please check this box, and/or contact Ghislaine Attema at 807-766-7509 or email cosc@nosm.ca for more information.

PAYMENT METHOD (Please choose one.)
☐ Cheque made payable to Northern Ontario School of Medicine
  Mail to: Ghislaine Attema, Northern Ontario School of Medicine, 955 Oliver Road, Thunder Bay, Ontario, P7B 5E1
☐ Visa  ☐ Mastercard
  Card #: ____________________________________________
  Expiry: _________  CVC: _________  (3-digit number on the back of your card)
  Signature: ________________________________________
  (Unable to process credit card payment if not signed.)

☐ Internal Budget Transfer (To be used by all NOSM employees.)
  Budget Code: _____________________________ Date: ___________
  Authorized Signature: ____________________________
  (Unable to process transfer if not signed.)

PAYMENT CALCULATION

Registration Fee: $______________
Friday Dinner ($35): $______________
TOTAL PAYMENT: $______________