

The 15th Annual International Conference on Dose-Response

PRECONDITIONING
**ADAPTIVE RESPONSES IN
BIOLOGY AND MEDICINE**

Building Biological Shields
Against Disease and Injury

The Annual Meeting of the
International **DOSE-RESPONSE** Society
www.Dose-Response.org

Conference Directors: Edward J. Calabrese, Ph.D., Paul Kostecki, Ph.D

April 19-20, 2016
University of Massachusetts
Amherst, MA

[Click here for Conference
Registration on-line.](#)

Threshold
Adaptive
Bidirectional
Biphasic
Hormetic
Non-Monotonic
U/J Shaped
Linear



*Approved for CPH Recertification by the
National Board of Public Health Examiners*

INTERNATIONAL DOSE-RESPONSE SOCIETY MEMBERSHIP

The **INTERNATIONAL DOSE-RESPONSE SOCIETY** is a professional society designed to enhance understanding of the nature of the dose response and its implications for science and society. Those Individuals with a professional interest in these areas are invited to join the Society.

Applications for membership can be found at www.dose-response.org. Annual membership rates are as follows:

Corporate Membership \$5000 (US),
Sustaining Membership \$1000 (US),
Individual Membership - 1yr. \$125 (US),
Individual Membership - 2yr. \$225 (US),
Retiree Membership - 1yr. \$75 (US),
Retiree Membership - 2yr. \$125 (US),
Post-Graduate Membership (up to three years post-graduation) - 1yr. \$75 (US),
Post-Graduate Membership (up to three years post-graduation) - 2yr. \$125 (US),
Student Membership - 1yr. \$10 (US) and
Student Membership - 2yr. \$15 (US).

Members will receive a 25% reduction in registration fees to **The 2016 Dose Response Conference, Adaptive Responses in Biology and Medicine**, the Annual Meeting of the International Dose-Response Society.

To Become a Member, Visit
www.dose-response.org

[Click here for Conference Registration on-line.](#)

A growing number of scientists, including toxicologists, pharmacologists, biostatisticians, epidemiologists, occupational and environmental medical researchers and others have begun to display considerable interest in the topic of hormesis, a dose response phenomenon characterized by a low dose stimulation and a high dose inhibition. While there are many professional societies that have a general interest in dose response relationships, none explicitly is devoted to the topic of understanding the nature of the dose response in general and hormesis in particular. The diversity of professional societies that may consider dose response issues, including hormesis, is nonetheless quite broad ranging from the agricultural to the biomedical and clinical sciences. However, nearly without exception, these societies tend to be strongly organized around professional advancement and not focused on specific scientific concepts. This makes the issue of hormesis one of diffuse interest across a broad range of professions. The present situation represents a major obstacle for the integrated assessment of the dose response in general and hormesis in particular. In order to provide intellectual and research leadership on the topic of hormesis, a professional association was created in 2005 called the International Dose-Response Society.

The Society is dedicated to the enhancement, exchange, and dissemination of ongoing global research efforts in the field of hormesis. In addition, the Society also strongly encourages the assessment of the implications of hormesis for such diverse fields as toxicology, risk assessment, risk communication, medicine, numerous areas of biomedical research, and all other biological disciplines including relevant engineering domains dealing with the dose response.

The International Dose-Response Society is administered by the School of Public Health & Health Sciences at the University of Massachusetts at Amherst.

If you would like additional information about the society including information on becoming a member, please contact Alfred Sorensen at sorensen@ehs.umass.edu or visit the society webpage www.dose-response.org.

PLATFORM PRESENTATIONS - Tuesday, April 19, 2016

8:30AM – Noon

PLENARY SESSION

Moderator: **George Perdrizet**, *University of California, San Diego CA*

Facilitating Preconditioning through Neurotechnology: Using New Tools to Optimize “Old Tricks”

James Giordano, *Georgetown University, Washington, DC*

Nikola B. Kohls PhD, *Coburg University of Applied Sciences and Arts, Coburg, Germany*

It’s Adaptation to Reactive Intermediates, But Not As We Know It: Time is of the Essence

Jaap Hanekamp, *University College Roosevelt, Middelburg, The Netherlands and University of Massachusetts, Amherst, MA*

Aalt Bast, *Maastricht University, Maastricht, The Netherlands*

Stimulus Frequency and Consequent Duration of the Induced Phenotype: Further Characterizations of the Hormetic Dose-Response Relationship

Jeffrey M Gidday, *LSU Health New Orleans, LA*

Molecular Dissection of Hormesis

Thomas E. Johnson and James R Cypser, *University of Colorado Boulder, Boulder CO*

Shane L. Rea Barshop, *University of Texas Health Science Center San Antonio, San Antonio, TX*

Alexander R. Mendenhall, *Brent Laboratory, Seattle, WA*

Noon

LUNCH

1:00 - 5:00PM

PRECONDITIONING BIOMEDICAL AND THERAPEUTIC APPLICATIONS: PART I

Moderator: **James Giordano**, *Georgetown University, Washington DC*

Ethanol Ingestion Elicits an Anti-inflammatory Phenotype to Limit Ischemia/Reperfusion Injury by a Neutrophil-dependent Mechanism

Richard Korthuis, *University of Missouri, Columbia, MO*

The Optimal Ischemic Postconditioning Protocol and its Relevance to Clinical Cardiology

James M Downey and Michael V. Cohen, *University of South Alabama, Mobile, AL*

Linking Mechanism with Clinical Findings: Preconditioning and Prevention of Myocardial Infarction Damage

Andrew Reddington, *Cincinnati Children's Hospital Medical Center, Cincinnati, OH*

Exercise is Medicine in the 21st Century - Emphasis on Efficacy, Dosing, Safety/Toxicity

Carl J Lavie, *Ochsner Health System, New Orleans, LA*

Remote Ischemic Conditioning to Prevent Organ Injury following Hemorrhagic Shock

Chung Ho Leung, *University of Toronto, Toronto, ON, Canada*

Thomas P. Reid, *McGill University, Montreal, QC, Canada*

Christopher A. Caldarone, *Hospital for Sick Children, Toronto, ON, Canada*

Xiao-Yan Wan and **Ori D. Rotstein**, *St. Michael's Hospital, Toronto, ON, Canada*

Neuroprotective Mechanism of Preconditioning Against Intracranial Stenosis and Ischemic Stroke

Yuchuan Ding, *Wayne State University School of Medicine, Detroit, MI*

Stress-Induced Protection of Sensory Hair Cells: Basic and Translational Studies

Lisa L. Cunningham, Elyssa L. Monzack, Lindsey A. May, *National Institute on Deafness and Other Communication Disorders National Institutes of Health, Bethesda MD*

Soumen Roy, *National Cancer Institute, National Institutes of Health, Bethesda MD*

Matthew M. Ryals, *National Institute on Deafness and Other Communication Disorders National Institutes of Health, Bethesda MD*

Tiffany G. Baker, *Medical University of South Carolina, Charleston, SC*

Shimon P. Francis, *National Institute on Deafness and Other Communication Disorders National Institutes of Health, Bethesda MD*

5:30 - 6:30PM

POSTER SESSION AND SOCIAL

6:30PM

DINNER

PLATFORM PRESENTATIONS - Wednesday, April 20, 2016

8:00AM – Noon

PRECONDITIONING BIOMEDICAL AND THERAPEUTIC APPLICATIONS PART II

Moderator: **Colin Seymour**, *McMasters University, Hamilton, ON*

Fighting Neurotoxicity with a Double-Edged Sword: The Dual Role of Thrombin in Neuron Health

Paul Garcia, *Emory University School of Medicine and VA Medical Center, Atlanta, GA*

Vincent T. Ciavatta, *VA Medical Center, Atlanta, GA*

Jonathan A. Fidler, Anna Woodbury and William R. Tyor, *Emory University School of Medicine and VA Medical Center, Atlanta, GA*

Intermittent Hypoxia-Induced Spinal Motor Plasticity: Implications for Spinal Injury

Gordon S. Mitchell, *University of Florida, Gainesville, FL*

Hypoxia Induction of Vascular Remodeling in the Brain: Defining the Dose-Response Relationship

Richard Milner and Amin Boroujerdi, *The Scripps Research Institute, La Jolla, CA*

Parameters of Hormetic Preconditioning Stress and Resilience to Trauma in Rats

Thomas Minor, *University of California Los Angeles, Los Angeles, CA*

Traci N. Plumb, *Robert Stone Dow Neurobiology Laboratories, Portland, OR*

Is Hyperbaric Oxygen the Preconditioning Agent of Choice?

George Perdrizet, *University of California, San Diego, CA*

Redox Modulation of Vitagenes by Hormetic Antioxidants: Relevance to Aging and Neurodegeneration

Maria Laura Ontario and **Vittorio Calabrese**, *University of Catania, Catania, Italy*

Preconditioning for Traumatic Brain Injury

Shyam Gajavelli, *Lois Pope LIFE Center, Miami, FL*

S. Yokobori, *Nippon Medical School, Tokyo, Japan*

A. T. Mazzeo, *University of Turin, Turin, Italy*

K. Hosein K, W. D. Dietrich and M. R. Bullock, *Lois Pope LIFE Center, Miami, FL*

Noon - 1:30PM

LUNCH - Speaker

Treatment of Alzheimer disease with CT scans

Jerry Cuttler, *Atomic Energy of Canada Limited (ret)*

1:00 - 3:30PM

CHEMICAL AND RADIATION IMPLICATIONS OF PRECONDITIONING

Moderator: **Colin Seymour**, *McMasters University, Hamilton, ON*

Age during Pre-Conditioning Hormesis Might be as Important as Dose for Improving Performance in Insect Models

Giancarlo Lopez-Martinez, *New Mexico State University, Las Cruces, NM*

Low Dose Radiation Effects: Are They at all Predictable?

Carmel Mothersill, *McMasters University, Hamilton, ON*

Radiation Induced Adaptive Protection

Eduard Azzam, *Rutgers University, Newark, NJ*

Panel Discussion

Jay Mitchell - Chair

School of Public Health, Harvard University, Cambridge, MA

Ori Rotstein, *St. Michael's Hospital, Toronto, ON, Canada*

Richard Korhuis, *University of Missouri, Columbia, MO*

Jaap Hanekamp, *University College Roosevelt, Middelburg, The Netherlands and University of Massachusetts, Amherst, MA*

George Perdrizet, *University of California, San Diego CA*

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CALL FOR POSTERS

We invite you to submit an ABSTRACT for poster presentation at
The 15th Annual International Conference on Dose-Response

PRECONDITIONING ADAPTIVE RESPONSES IN BIOLOGY AND MEDICINE **Building Biological Shields Against Disease and Injury**

APRIL 19-20, 2016

University of Massachusetts at Amherst

Sponsored by
International DOSE-RESPONSE Society
www.Dose-Response.org

*The conference will address a multidisciplinary and mechanistic focus
in toxicology, medicine, pharmacology, radiation, risk assessment for
dose-response relationships.*

AREAS OF INTEREST

PRE- POST-CONDITIONING:

Alzheimer's Disease/Dementia
Parkinson's Disease
Depression and PTSD
Concussions/Traumatic Brain Injury
Improving Surgical Outcomes
Stroke/Cardiovascular Disease
Diabetes
Glaucoma
Stem Cell Transplantation Therapy

HEALTHY LIFESTYLES, AGING

AND LIFE EXTENSION:
Intermittent Fasting
Exercise
Chemical/Nutritional Supplements
Low Dose Radiation and Longevity
Adaptive response-based cosmetics
ENHANCING HUMAN PERFORMANCE:
Cognition
Endurance, Strength and Speed
Fatigue/Jet Lag: Prolong Onset/
Speed Up Recovery
Wound Healing Acceleration - skin,
tendon, muscle, bone, and vascular

Enhancing Healthy Living and Performance

Please visit conference website

www.dose-response.org

For abstract submission guidelines as well as information
about the conference and the Dose-Response society
email Conference Coordinator, Denise Leonard at

dleonard@schoolph.umass.edu

*Deadline for abstract submissions for the
Dose-Response 2016 Conference poster session is*

MARCH 18, 2016

Conference Directors :

Edward J Calabrese, Ph.D., Paul T. Kostecki, Ph.D.

AREA HOTEL INFORMATION

Registrants are responsible for making their own hotel arrangements.
(We recommend you make reservations early)

Amherst	Single/Double	Hadley	Single/Double
Allen House Inn (413) 253-5000	\$75-150	Econo Lodge (413) 582-7077	\$79-149
Amherst Motel (413) 256-8122	\$59-85	Hampton Inn (413) 586-4851	\$119-179
Black Walnut Inn (413) 549-5649	\$108-159	Holiday Inn Express (413) 582-0002	\$119-200
Campus Center Hotel (UMass) (413) 549-6000	\$120	Howard Johnson (413) 586-0114	\$85-179
Lord Jeffrey Inn (413) 253-2576	\$129-259	Norwottuck Inn (413) 587-9866	\$159-179
University Motor Lodge (413) 256-8111	\$70-150	Quality Inn (413) 584-9816	\$69-145
Deerfield	Single/Double	Northampton	Single/Double
Deerfield Inn (413) 774-5587	\$170-270	Autumn Inn (413) 584-7660	\$99-180
Red Roof Inn (413) 665-7161	\$75-125	Best Western (413) 586-1500	\$69-149
Holyoke	Single/Double	Clarion Hotel (413) 586-1211	\$100-235
Country Inn & Suites (413) 533-2100	\$89-189	Hotel Northampton (413) 584-3100	\$145-180
Holyoke Holiday Inn (413) 534-3311	\$120-150		

* For those attendees wishing to stay at the Campus Center Hotel where the
conference will be held, telephone the hotel directly at (413) 549-6000.
IDENTIFY THE CONFERENCE AS HOTEL BLOCK DR16C.

*University Conference Services does not guarantee the accuracy of any of the rates
listed above.*

FOR CONFERENCE INFORMATION

Please contact the conference coordinator Denise Leonard
413-545-1239 • dleonard@schoolph.umass.edu

LOCATION AND TRAVEL INFORMATION

The conference will take place in the Murray D. Lincoln Campus Center,
University of Massachusetts at Amherst, located in the scenic
Connecticut River Valley. Amherst is served by major airlines through
Bradley International Airport in Windsor Locks, Connecticut (about 1 1/4
hours by car) and **Logan Airport** in Boston (about 2 1/2 hours by car).
Rental cars and bus service are available from both airports.

There are two services that provide shuttle service to and from both
airports, Amtrak and bus stations to the University of Massachusetts -
Seemo Shuttle Service and Valley Transporter.

Seemo Shuttle Service - call (800) 908-2829 or (413) 586-1120 or
visit www.seemoshuttle.com

The Valley Transporter - RESERVATIONS ARE REQUIRED,
call (800) 872-8752 or (413) 253-1350 or visit www.valleytransporter.com.

REGISTRATION

All Registrations for the conference must be received by the
University Conference Services no later than **April 5, 2016**
in order to avoid late registration fee of \$50.

To register for the conference please fill out and return the
accompanying registration form to:

Conference Registration Office - CS16-230

810 Campus Center

University of Massachusetts

1 Campus Center Way

Amherst, MA 01003

Phone: **413-577-8102**; Fax: **413- 577-8130**

For further information contact us at:

INTERNATIONAL DOSE-RESPONSE SOCIETY

Phone: **413-545-3164**; Fax: **413-545-4692**

Email: dleonard@schoolph.umass.edu

www.dose-response.org

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April 19 - 20, 2016 • University of Massachusetts, Amherst, MA

R E G I S T R A T I O N F O R M

To Register: Form should be received on or before **April 5, 2016** with full payment.

Mail or fax to: **Conference Registration Office - CS16-230**

810 Campus Center

University of Massachusetts

Amherst, MA 01003

Phone: 413-577-8102 • Fax: 413- 577-8130

For Office Use _____
Case No. _____
Ref. No. _____
Date _____
Payment _____
Confirmed _____

Mr. Mrs. Ms. Dr.

First: _____ MI: _____ Last: _____

Title: _____ Company: _____

Address: _____

City: _____ State: _____ Zip: _____ Country: _____

Telephone: _____ Fax: _____

Email: _____

Registration: Includes all sessions and refreshment breaks

<i>Full Two Days</i>	\$499
<i>Full Two Days for International Dose-Response Society Members*</i>	\$299
<i>Government and Academic Rate</i>	\$199
<i>Government and Academic Rate for International Dose-Response Society Members*</i>	\$149
<i>Student Rate</i>	\$99
<i>Student Rate for International Dose-Response Society Members*</i>	\$74

**Must be a member at the time of registration to receive the International Dose-Response Society Members rate*

Sub Total _____

Hot Buffet Lunch: \$28 each day Tuesday Wednesday

Lunch Total _____

Hot Buffet Dinner: \$38 Tuesday

Dinner _____

Note: All registrations received after **April 5, 2016**, will be assessed a \$50 late fee

Late Fee _____

Total _____

Visa Amex Master Card Diners Discover Check payable to: UMass/Conference Services CS16-230

Card Number: _____ Expiration Date: _____

Name on Card (print): _____ 3 digit CVV/Security Code: _____

Signature (all charges must be signed): _____

Hotel Reservations: CONFERENCE ATTENDEES ARE RESPONSIBLE FOR THEIR OWN HOTEL RESERVATIONS

Encumbered Purchase Orders will be accepted from institutions and agencies for the purpose of pre-registration only. Full payment including those pre-registrations secured by P.O. must be remitted on or before the on-site registration. Non-compliance will result in a \$35 processing fee for any resulting billings. Phone registrations will not be accepted. Checks must be redeemable at US banks. Any processing fees will be filled to the registrant. Cancellations made by the close of business (5:00pm EST) on April 12, 2016, will receive a full refund minus a \$60 cancellation fee and any administrative fees. There will be no refunds for cancellations made after the close of business on April 12, 2016. Registrations should be received on or before April 5, 2016. After April 5, 2016, a \$50 late fee will be assessed.

For more conference information contact: INTERNATIONAL DOSE-RESPONSE SOCIETY

Phone: 413-545-3164 • Fax: 413-545-4692 • Email: dleonard@schoolph.umass.edu

Online Conference Registration: <https://umass.irisregistration.com/Site/Dose>