

International DOSE-RESPONSE Society

www.Dose-Response.org

Focusing on the Dose-Response in the Low-Dose Zone

2002 Conference Overview

<p>Title and Site for International Hormesis Society's 2002 Annual Conference June 11 - 13, 2002</p>	<p>NON-LINEAR DOSE-RESPONSE RELATIONSHIPS IN BIOLOGY, TOXICOLOGY, AND MEDICINE 2002 <i>Scientific Foundations for Pharmaceuticals and Environmental Risk Assessment</i> University of Massachusetts, Amherst, MA US</p>
<p>Conference Coordinator</p>	<p>Denise Leonard, MSc</p>
<p>Registration Fees</p>	<p>Full Three Days: \$399 Government and Academic Rate: \$199 Student Rate: \$99</p>
<p>Award Recipient for "Outstanding New Researcher in the Field of Hormesis"</p>	<p>Instituted in 2007</p>
<p>Award Recipient for "Outstanding Senior Researcher in the Field of Hormesis"</p>	<p>Instituted in 2007</p>
<p>Platform Presentation: Plenary</p>	<p>Moderator: Paul T. Kostecki, <i>University of Massachusetts, Amherst, MA</i></p> <p>Biphasic Dose Responses in the Biological Sciences Edward J. Calabrese, <i>University of Massachusetts, Amherst, MA</i></p> <p>Implications of Non-Linearity for Ecotoxicological Risk Assessment Keith Solomon, <i>University of Guelph, Guelph, Ontario, Canada</i></p> <p>Evolutionary Foundations of Non-Linearity Lorenz Rhomberg, <i>Gradient Corporation, Cambridge, MA</i></p> <p>Risk Assessment Implications of Non-Linear Dose-Responses William F. Greenlee, <i>Chemical Industry Institute of Toxicology, Research Triangle Park, NC</i>; Frederick J. Miller, <i>CIIT Centers for Health Research, Research Triangle Park, NC</i>; Rory B. Conolly, <i>Center for Computational Biology & Extrapolation Modeling, Research Triangle Park, NC</i></p>
<p>Platform Presentation: Chemical</p>	<p>Moderator: John DeSesso, <i>Mitretek Systems, Inc., Falls Church, VA</i></p> <p>Complex Shapes of Dose-Response Curves as the Summation of Underlying Low-Dose-Linear and Saturable Processes Rory Conolly, <i>CIIT Centers for Health Research, Research Triangle Park, NC</i> David W. Gaylor, <i>Sciences International, Inc., Little Rock, AR</i> Kevin W. Gaido, <i>CIIT Centers for Health Research, Research Triangle Park, NC</i> Werner K. Lutz, <i>University of Wurzburg, Wurzburg</i></p> <p>From Mice to Men, Cancers Are Not Certain at Old Age Francesco Pompei & Richard Wilson, <i>Harvard University, Cambridge, MA</i></p>

Implications of Hormesis in Developmental Toxicology Risk Assessment

Mehdi Razzaghi, *Bloomsburg University, Bloomsburg, PA*

Using Dose and Time to Predict Acute and Chronic Toxicity

Karl Rozman, *University of Kansas Medical Center, Kansas City, KS*

Experiences with Non-Linear Dose-Response Relationships in Chemical Evaluations

Dennis Jones, *ATSDR, Atlanta, GA*

Risk Modeling Implications of Mechanistic Differences between Low and High Dose Effects of Arsenic

Christopher Wells, Tracey M. Slayton, Barbara C. Beck & Thomas A. Lewandowski, *Gradient Corporation, Cambridge, MA*

Hormesis, Low Dose Carcinogenicity and Low Dose Anti-Carcinogenicity Occur in the Same Animal and with the Same Chemical

Richard Wilson, *Harvard University, Cambridge, MA*

Data for Trichloroethylene-Induced Kidney Tumors in Rodents Suggest an Epigenetic Mechanism of Action

Amy Lavin, *International Life Sciences Institute, Washington, DC*

Catherine F. Jacobson & John M. DeSesso, *Mitretek Systems, Inc., Falls Church, VA*

Quantitation of the Dose Response for Formation of DNA Adducts in Rat Liver by 2-Acetylaminofluorene

Gary Williams, Michael J. Iatropoulos, Jian-Dong Duan & Alan M. Jeffrey, *New York Medical College, Valhalla, NY*

Platform Presentation:
Radiation

Moderator: Klaus Becker, *Berlin, Germany*

Impact of Cellular Defense Mechanisms and Bystander Effects on a Multi-Stage Carcinogenesis Model

Helmut Schollnberger, *University of Salzburg, Salzburg, Austria/Europe;*

Margaret G. Menache, *University of New Mexico, Albuquerque, NM;* Rod

Stewart, *Pacific Northwest National Laboratory (PNNL), Richland, WA;*

Werner Hofmann, *University of Salzburg, Salzburg, Austria/Europe*

Human Cells Respond to Changes in Background Radiation by Inducing Specific Heat Shock Protein Members

Satya P. Saxena, Neerad C. Mishra, & Steven P. Allen, *Lovelace Respiratory*

Research Institute, Albuquerque, NM; Raymond A. Guilmette, *Los Alamos National Laboratory, Los Alamos, NM*

Low-Dose Protective Mechanisms: Implications for Risk Assessment

Bobby R. Scott, Dale M. Walker, Vernon Walker, James Aden, & Yohannes Tesfaigzi, *Lovelace Respiratory Research Institute, Albuquerque, NM*

Non-Linear Dose-Response Curves in the Immune System Following Whole-Body X-Irradiation

Shu-Zheng Liu, *Norman Bethune University of Medical Sciences, Changchun, China*

The Hormetic Health Effects of Radiation Observed in the Incident of Co-60 Contaminated Apartments in Taiwan

Y.C. Luan, M.C. Shieh, S.T. Chen, K.L. Soong, & W.K. Wang, *Nuclear Science & Technology Association, Taipei, Taiwan, ROC;* C.M. Tsai, *Atomic Technology*

Foundation, Taipei, Taiwan, ROC; W.L. Chen, T.S. Chou, S.H. Mong, J.T. Wu & C.P. Sun, *NBC Protection Society, Taipei, Taiwan, ROC*

Dose-Response Relationship: Chromosome Aberrations in Residents at the High Background Radiation Areas in Ramsar, Iran

S.M. Javad Mortazavi & Takaji Ikushima, *Kyoto University of Education, Kyoto, Japan;*

P. Andrew Karam, *University of Rochester, Rochester, NY*

Residential Radon in U.S. Counties vs. Lung Cancer in Women who Predominantly Never Smoked

K.T. Bogen, *Lawrence Livermore National Laboratory, Livermore, CA;*

J. Cullen, *University of California Berkeley, Berkeley, CA*

Treatment of Confounding Factors in Ecological Study Test of Linear-No Threshold Theory

Bernard Cohen, *University of Pittsburgh, Pittsburgh, PA*

The Bolton-Brush Radiographic Growth Studies

B. Holly Broadbent & P.S. Rao, *Case Western Reserve University, Cleveland, OH*

<p>Platform Presentation: Ultra-Low Doses and Medicine</p>	<p>Moderator: Wayne Jonas, <i>Samueli Institute, Alexandria, VA</i></p> <p>Effects of Low Dose Cadmium on Stress Proteins and Survival in Human Prostate Cells Jaya Gaddipati, Rajesh Kumar NV, <i>Uniformed Services University of the Health Sciences, Bethesda, MD</i>; William Achanzar, <i>NCI at NIEHS, Research Triangle Park, NC</i>; Radha K. Maheshwari, Wayne Jonas, <i>Uniformed Services University of the Health Sciences, Bethesda, MD</i></p> <p>Non-Immunological Sensitization: A Nonlinear Host Dose-Response to Repeated Low Level Chemical Exposures Iris Bell, <i>The University of Arizona College of Medicine, Tucson, AZ</i>; Carol Baldwin, Gary E. Schwartz, <i>University of Arizona, Tucson, AZ</i></p> <p>Ultra-low Doses and Biological Responses: A Review of the Literature and Recent Experiments Wayne B. Jonas, <i>Samueli Institute, Alexandria, VA</i></p> <p>High Sensitivity 1H-NMR Studies of Homeopathic Remedies: Unexplained Peaks in the Spectra of Some Samples David Anick, <i>Harvard University, Cambridge, MA</i></p> <p>Challenges to the Investigation of Low and Ultra-Low Dose Effects Roeland van Wijk, <i>University of Utrecht, Geldermalsen, The Netherlands</i></p> <p>Low Dose Effects in Pulmonary Disease Rebecca Bascom, <i>Penn State Milton S. Hershey Medical Center, Hershey, PA</i></p>
<p>Platform Presentation: Biomedical</p>	<p>Moderator: David Diamond, <i>University of South Florida, Tampa, FL</i></p> <p>Non-Linear Functions between Stress Hormones, Brain Plasticity and Memory David Diamond, <i>University of South Florida, Tampa, FL</i></p> <p>Biphasic Effects of Progesterone Treatment on Proliferation of Normal and Malignant Human Ovarian Surface Epithelial Cells Viqar Syed & Shuk-Mei Ho, <i>University of Massachusetts Medical School, Worcester, MA</i></p> <p>Two Examples of Paradoxical Pharmacology Using <i>In Vivo</i> Animal Models of Disease Kenda LJ Evans, Zsuzsanna Callaerts-Vegh, <i>University of Houston, Houston, TX</i>; Felix Shardonofsky, <i>Texas Children's Hospital, Houston, TX</i>; Heather Giles, <i>GlaxoSmithKline, Herfordshire, UK</i>; Richard Bond, <i>University of Houston, Houston, TX</i></p> <p>Using <i>C. elegans</i> to Model Induced Stress Resistance and Life Span Hormesis James Cypser & Thomas E. Johnson, <i>University of Colorado, Boulder, CO.</i></p> <p>Biological Aging and Its Hormetic Modulation by Repeated Challenge Suresh Rattan, <i>University of Aarhus, Aarhus, Denmark</i></p> <p>Hormetic vs Inhibitory Effects in Sea Urchin Bioassays Giovanni Pagano, <i>Istituto Nazionale Tumori, Naples, Italy</i></p> <p>Non Linear Factors Affecting Exposure and Risk to Anthrax Dennis Jones, <i>ATSDR, Atlanta, GA</i></p> <p>Biphasic Effects of Cardiac Glycosides (Ouabain) on Vascular Smooth Muscle Cell Proliferation Julius Allen, Joel Abramowitz & Ashihan Aydemir-Koksoy, <i>Baylor College of Medicine, Houston, TX</i></p> <p>Altered Phenotype in Glial Cells Underlies the Low-Dose Neuroprotection Against Neurotoxicity Victor M. Pentreath, <i>University of Salford, Salford, UK</i>; Mark R. Cookson, <i>Mayo Clinic, Jacksonville, FL</i>; Carole Mead, <i>Christie Hospital, Manchester, UK</i>; Debbie Slamon, <i>AstraZeneca Pharmaceuticals, Cheshire, UK</i></p> <p>Is the Hygiene Hypothesis an Example of Hormesis? John A. Bukowski, <i>ExxonMobil Biomedical Sciences, Inc., Annandale, NJ</i>; Philip G. Lewis, <i>Rohm and Haas Company, Bristol, PA</i></p>

	<p>Tissue-Specific Dysfunction Induced by Menadione in Blood Vessels: Mechanisms for U-shape Dose-Response Curve Jin-Ho Chung & Jee-Yeon Han, <i>Seoul National University, Seoul, Korea</i></p>
<p>Platform Presentation: Risk Assessment</p>	<p>Moderator: Gary Marchant, <i>Arizona State University, Tempe, AZ</i></p> <p>Non-Linear Dose Response: Legal Standards for the Admission of Novel Scientific Theories in Regulatory Decision-Making Gary Marchant, <i>Arizona State University College of Law, Tempe, AZ</i></p> <p>Implications of Hormesis for Industrial Hygiene Michael Jayjock, <i>Rohm and Haas Company, Spring House, PA</i>; Philip G. Lewis, <i>Rohm and Haas Company, Bristol, PA</i></p> <p>Do We Need any Legal Limits for Radon below about 500 Bq/m3? Klaus Becker, <i>Berlin, Germany</i></p> <p>Some Thoughts about How to Incorporate Hormesis Into the Risk Assessment Process Brent L. Finley, <i>Exponent, Santa Rosa, CA</i>; Dennis J. Paustenbach, <i>Exponent, Menlo Park, CA</i></p> <p>Radiation Hormesis: Molecular-Cellular Biology, Epidemiology, and Prevention and Therapy of Cancer Myron Pollycove, <i>University of California, North Bethesda, MD</i>; Ludwig E. Feinendegen, <i>Heinrich-Heine-University Duesseldorf, Lindau, Germany</i></p> <p>Basic Research Needs Panel (DOE, NIEHS, CIIT, Air Force, Pharmaceutical Industry) Kenneth A. Mundt, <i>Applied Epidemiology, Inc., Amherst, MA</i> Wayne Jonas, <i>USUHS, Bethesda, MD</i>, Klaus Becker, <i>Berlin, Germany</i> Antone L. Brooks, <i>Washington State University, Richland, WA</i> Rory B. Conolly, <i>Center for Computational Biology & Extrapolation Modeling, Research Triangle Park, NC</i></p>
<p>Luncheon Speaker: Joscelyn Kaiser Science News Reporter, <i>Science</i></p>	<p>Reporting on Toxicology and Risk Assessment</p>
<p>Luncheon Speaker: John Doull, M.D., Ph.D. Dept of Pharmacy, Toxicology and Therapeutics, <i>University of Kansas Medical Center</i></p>	<p>Risk Assessment Milestones</p>
<p>Poster Sessions</p>	<p>Neurobehavioral Hormesis: The Exclusion of Compounds that Activate Arousal Systems in the Brain Marni Y.V. Bekkedal, Glenn D. Ritchie, Kenneth R. Still & John Rossi III, <i>Naval Health Research Center Detachment (Toxicology), Wright-Patterson Air Force Base, OH</i></p> <p>Debates Over Linearity: Much Ado About Evidence; Not Enough About Relevance Nor Preference Kevin P. Brand, <i>University of Ottawa, Ottawa, ON, Canada</i>; Lorenz Rhomberg, <i>Gradient Corporation, Cambridge, MA</i></p> <p>Effects of Superlow Doses Elena B. Burlakova & Alexander A. Konradov, <i>Russian Academy of Sciences, Moscow, Russia</i></p> <p>New Approaches to Modeling of Living Systems Response to Ultra Weak Actions Elena B. Burlakova, <i>Russian Academy of Sciences, Moscow, Russia</i></p> <p>Effects of a 'Lead-free' Environment on Fertility and Reproductive Function in Female Mice Ivo Iavicoli, Giovanni Carelli & Nicolo Castellino, <i>Catholic University of the Sacred Heart, Rome, Italy</i></p> <p>Pseudo Hormesis: An Explanation in Search of a Manifestation Susan M. Chemerynski & Jonathen Borak, <i>Yale University, New Haven, CT</i>; Greg Sirianni, <i>University of New Haven, West Haven, CT</i>; Bernard L. Cohen, <i>University of Pittsburgh, Pittsburgh, PA</i></p>

Usefulness of Very Low-Doses of Cisplatin in Regulation of Animal and People Health Conditions

Elzbieta Deranalowicz-Malarczyk, Martyna Kandefer-Szerszen, Anna Jarosz-Wilkolazka, Agnieszka Szuster-Ciesielska & Liliana Borowska, *Marie Curie-Sklodowska University, Lublin, Poland*

The Effect of Low-Dose of Guaiacol on Enzymatic Activity of Fungal Cells

Elzbieta Deranalowicz-Malarczyk, Anna Jarosz-Wilkolazka & Janina Kochmanska-Rdest, *Marie Curie-Sklodowska University, Lublin, Poland*

Ultra-weak Secondary Radiation Chemiluminescence of Humic Acid Induced by Gamma-irradiation

Wieslaw Goraczko & Janusz Slawinski, *Poznan Univeristy of Techical, Poznan, Poland*

Linear and Non-linear Effects of Lead on Behavior of *Drosophila melanogaster*

Helmut V.B. Hirsch, John D. Mercer, Tara Torno, Diane Stark & Helen Ghiradella, *The University at Albany, SUNY, Albany, NY*

Extracellular Replication of Bacteria in Presence of Cytokines or Lipopolysaccharide(LPS): Linear and Non-Linear Responses

Siva Kanangat, Umberto Meduri, Elizabeth A. Tolley, Arnold E. Postlethwaite & Dennise R. Schaberg, *University of Tennessee Memphis, Memphis, TN*

A Mathematical Model for Curve-Fitting Allelochemical Dose-Responses

D.L. Liu, *NSW Agriculture, Wagga Wagga, NSW, Australia*; M. A.n, *Charles Sturt University, Wagga Wagga, NSW Australia*; J.V. Lovett, *Unversity of New England, Armidale, NSW, Australia*

Nectophotometer: A New Instrument for Observing Hormesis

Richard W. Lo Pinto & John Santelli, *Fairleigh Dickinson University, Teaneck, NJ*

Adaptive Response in Two Populations of Uranium Miners Exposed to Low and High Doses of Radiation

Jose Henrique Pereira Luis, *Nuclear and Technological Institute, Sacavem, Portugal*

Bimodal Type of Regulation of Protein Kinase C by Antioxidants Down to Ultra-Low Doses

Elena L. Maltseva & Nadya P. Palmina, *Institute of Biochemical Physics RAS, Moscow, Russia*; Konstantin Gurevich, *Lomonosov Moscow University, Moscow, Russia*

Adaptation to Radiation: Reductions in Risk after Low Doses *in vivo*

R.E.J.Mitchel, *Atomic Energy of Canada, Ltd, D.R. Boreham, McMaster University*

The History of Chemical Hormesis and Potential Implications for Modern Risk Assessment and Epidemiology

Kenneth A. Mundt, *Applied Epidemiology, Inc., Amherst, MA*
Edward J. Calabrese & Linda A. Baldwin, *University of Massachusetts, Amherst, MA*

The Development of a Reproducible Toxicological Bioassay to Elucidate Hormesis

Marc A. Nascarella, John G. Stoffolano, Jr. & Edward J. Calabrese, *University of Massachusetts, Amherst, MA*

Hyperbolic Radiopathogenic Processes for Chernoboyl-touched Children

Eugene A. Neyfakh, *Institute of Biochemical Physics, Moscow, Russia*

Continuous Low Dose-Rate Gamma-Irradiation Induce Non-Linear Changes of DNA-Protein Cross-Links in Lymphocytes of Mice

Andreyan N. Osipov & Alexander L. Elakov, *Moscow SIA "Radon", Moscow, Russia*;
Galina Ya. Kolomijtseva, *M.V.Lomonosov Moscow State University, Moscow, Russia*;
Vyacheslav D. Sypin, *Moscow SIA "Radon", Moscow, Russia*

The Effect of Antioxidants in Ultra Low Doses on Lipid Peroxide Oxidation in Biological Membranes

Nadezhda P. Palmina, Lyubov V. Kledova & Tatyana V. Pankova, *Emanuel Institute of Biochemical Physics RAS, Moscow, Russia*

Nonlinear Dose-Response Behavior and Multiple Solutions for a Model of the Menstrual Cycle

Paul M. Schlosser, *CIIT Centers for Health Research, Research Triangle Park, NC*;
James F. Selgrade & Leona Harris, *North Carolina State University, Raleigh, NC*

Extremelv Low Freuquency Electromaagnetic Field (ELF-EMF)-Stress Induced DNA Damage in Human Peripheral Blood Leukocvtes Evaluated by Comet

Assay
 Ravindra K. Tiwari, *New Science College, Hyderabad, India*; K. Irarvathy Goud, *Bhagwan Mahavir Medical Research Centre, Hyderabad, India*; K. Suryanarayana, *Research Center Imarat, Hyderabad, India*; S.C Bhargava & Y. Rahuja, *Bhagwan Mahavir Medical Research Centre, Hyderabad, India*

Non-Linear Dose-Response of Alcohol Drinking in a Large Population
 Natalia Udaltsova & Arthur L. Klatsky, *Kaiser Permanente Medical Care Program, Oakland, CA*

Season of Birth and Human Longevity in a Large Population
 Natalia Udaltsova, Gary D. Friedman & Arthur L. Klatsky, *Kaiser Permanente Medical Care Program, Oakland, CA*; Germaine Cornelissen, *Halberg Chronobiology Center, University of Minnesota, Minneapolis, MN*; Franz Halberg, *Halberg Chronobiology Center, University of Minnesota, Minneapolis, MN*

Gamma Variate (Indicator Dilution Curve): Analogy to Describing Selected Hormesis Effects
 J.A. Vento & R.P. Spencer, *Univ. of Connecticut Health Center, Farmington, CT*

Conference Scientific Advisory Board

Iris Bell, M.D., Ph.D., *The University of Arizona College of Medicine*
 Michael P. Bolger, Ph.D., *US FDA*
 Richard Bond, Ph.D., *University of Houston*
 Giovanni Carelli, Ph.D., *Catholic University of Sacred Heart, Italy*
 Peter M. Chapman, Ph.D., *EVS Environmental Consultants, Ltd., Canada*
 George P. Daston, Ph.D., *Procter & Gamble Company*
 David M. Diamond, Ph.D., *University of South Florida*
 Ludwig E. Feinendegen, M.D., *Heinrich-Heine-University Duesseldorf, Germany*
 Donald E. Gardner, Ph.D., *Inhalation Toxicology Association*
 John H. Graham, Ph.D., *Berry College, Dept of Biology*
 A. Wallace Hayes, Ph.D., *The Gillette Company*
 Michael Jayjock, Ph.D., *Rohm & Haas*
 Wayne Jonas, M.D., *Samueli Institute, Alexandria, VA*
 Ralph L. Kodell, Ph.D., *NCTR*
 Walter J. Kozumbo, Ph.D., *AFOSR/NL*
 Shu-Zheng Liu, M.D., *Norman Bethune University of Medical Sciences, P.R.China*
 Werner K. Lutz, Ph.D., *University of Wuerzburg, Germany*
 Harihara M. Mehendale, Ph.D. *DABT, Northeast Louisiana University*
 Ricardo Ochoa, Ph.D., *Pfizer*
 James T. Oris, Ph.D., *Miami University*
 Wim Passchier, Ph.D., *Health Council of the Netherlands*
 Suresh I.S. Rattan, Ph.D., D.Sc., *University of Aarhus, Denmark*
 Denise Robinson, Ph.D., *ILSI Health and Environmental Sciences Institute*
 George M. Rusch, Ph.D., *Honeywell International*
 Leslie Stayner, Ph.D., *NIOSH*
 Kenneth R. Still, Ph.D., *MBA, Naval Health Research Center/TD*
 Elmer Szabadi, Ph.D., *Queen's Medical Center, Div of Psychiatry, UK*
 Bailus Walker, Jr., Ph.D., MPH, *Howard University College of Medicine*
 Richard Wilson, Ph.D., *Harvard University*
 Raymond Yang, Ph.D., *Colorado State University*
 Nasser H. Zawia, Ph.D., *University of Rhode Island*
 Ed Zillioux, Ph.D., *FPL Environmental Services*

Conference Sponsors

Air Force
AWWA Research Foundation
CRC Press
Department of Energy
Dow Corning
Environmental Protection Agency
ExxonMobil
Health Canada
Honeywell
NIEHS
Nuclear Regulatory Commission
Pfizer
Philip Morris, Inc.
Radiation Science and Health Center for Nuclear Technology and Society at WPI
Rhom and Haas Company
R. J. Reynolds

Close Window