2003 Conference Overview

Title and Site for	NON-LINEAR DOSE-RESPONSE RELATIONSHIPS IN BIOLOGY, TOXICOLOGY, AND MEDICINE 2003
International Hormesis Society's	Scientific Foundations for Pharmaceuticals and
2003 Annual Conference	Environmental Risk Assessment
May 28 - 30, 2003	University of Massachusetts, Amherst, MA US
Conference Coordinator	Denise Leonard, MSc
Registration Fees	Full Three Days: \$399
	Government and Academic Rate: \$199
	Student Rate: \$99
Award Recipient for "Outstanding New Researcher in the Field of Hormesis"	Instituted in 2007
Award Recipient for "Outstanding Senior Researcher in the Field of Hormesis"	Instituted in 2007
Platform Presentation: General Principles	Moderator: Russell Keenan, AMEC, Portland, ME
	Biomedical Implications of Hormesis
	Edward J. Calabrese, University of Massachusetts, Amherst, MA
	Edward J. Calablese, University of Massachusetts, Allinerst, MA
	Biological Switching Mechanisms and Dose Response Relationships
	Melvin Andersen, CIIT-Center for Health Research, Research Triangle Park, NC
	The Bystander Effect: Recent Developments and Implications for Understanding the Dose-Response
	Ronald Mitchel, Atomic Energy of Canada, Ltd., Chalk River, ON
	The Potential Impact of Hormesis on Risk Assessment
	Russell Keenan, AMEC, Portland, ME
	The Implications of Non-Linear Effects in Risk Assessment Harmonization
	John A. Bukowski & R. Jeffrey Lewis, ExxonMobil Biomedical Sciences, Inc., Annandale, NJ
	Economic Implications of Hormesis
	Jim Hammit, Harvard University School of Public Health, Boston, MA
Platform Presentation: Radiation	Moderator: Ludwig E. Feinendegen, Heinrich-Heine-University D.sseldorf, Germany
	Assessment of Low-Dose Radiation Risk in Europe: Diverging Authorities and Scientists
	Klaus Becker, Radiation, Science & Health, Berlin, Germany

	Responses to Low Doses of Ionizing Radiation in Biological Systems
	Ludwig E. Feinendegen, Heinrich-Heine-University D.sseldorf, Germany Myron Pollycove, University of California San Francisco Medical School, San Francisco, CA
	Radiation-Induced Change in Cell Proliferation and its Neuroendocrine Regulation: Dose-Response Relationship and Pathophysiological Implications Shu-Zheng Liu, MH Radiobiology Research Unit, Jilin University Health Sciences Center, Changchun, China
	Low-Dose Radiation and Genotoxic Chemicals Protect Against Stochastic Biological Effects Bobby R. Scott, Dale M. Walker & Vernon Walker, Lovelace Respiratory Research Institute, Albuquerque, NM
	Low Dose Radiation Health and Medical Benefits: A Century of Hard Data and Soft Science Jim Muckerheide, Center for Nuclear Technology and Society, Worcester Polytechnic Institute, Worcester, MA
Platform Presentation: Chemical Carcinogenesis	Moderator: Ludwig E. Feinendegen, Heinrich-Heine-University D.sseldorf, Germany
	Dose-Response Curves in Chemical Carcinogenesis William J. Waddell, University of Louis ville, Dept. of Pharmacology and Toxicology, Prospect, KY
	Detoxication Strategy of Epoxide HydrolaseDThe Basis for a Novel Threshold for Definable Genotoxic Carcinogens Franz Oesch & Michael Arand, Institute of Toxicology, University of Mainz, Mainz, Germany
Platform Presentation: Biochemical	Moderator: Wayne Jonas, Samueli Institute, Bethesda, MD
	The Treatment of Chronic Prostatitis with Low Level Chorionic Gonadotropin John McLane & John McMichael, Milkhaus Laboratory, Inc., Providence, RI
	Non-Linear Dose-Response Effects of Neurosteroids on Brain Plasticity and Memory David M. Diamond, University of South Florida and Veterans Hospital, Tampa, FL
	Possible Clinical Implications of Hormesis Wayne Jonas , Samueli Institute, Bethesda, MD
	Biphasic and U-Shaped Opioid Dose-Responses in the Immune System Burt M. Sharp, University of Tennessee, Memphis, TN
	Molecular Mechanisms of Anti-Aging Effects of Mild Heat Stress on Human Cells Dr. Suresh I.S. Rattan, University of Aarhus, Denmark
	Biphasic Response of Ciprofloxacin in Human Fibroblast Cell Cultures Filiz Hincal & Aylin G.rbay, University of Hacettepe, Ankara, Turkey Alain Favier, Universite Joseph Fourier, France
Platform Presentation: High Profile Toxic Substances and the Non-Linear Features of their Dose-Response Relationships	Moderator: Ralph L. Kodell, U.S. Food and Drug Administration, Jefferson, AR
	Asbestos: Non-Linear Dose Response Relationships in in vitro Assays and Inhalation Experiments Brooke Mossman & Arti Shukla, Ph.D., University of Vermont College of Medicine, Burlington, VT, Pamela Vacek, PhD, University of Vermont, Burlington,
	The Particulate Air Pollution Controversy Robert F. Phalen, University of California, Irvine, CA
	Mechanistic Model Predicts Low-Dose Nonlinearity of Liver Tumor Risk in Mice Fed Fumonisin B1 Ralph L. Kodell & Angelo Turturro, U.S. Food and Drug Administration, Jefferson, AR
	Dioxin Thomas Starr, <i>TBS Associates, Raleigh, NC</i>
	The Chloroform Saga: Science Trumps Policy? Jay Goodman, Michigan State University, East Lansing, MI

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	Justification, Application and Implication of Presumed Linearity for Dioxin and Dioxin-Like Compounds John D. Schell, BBL Sciences, Tallahassee, FL
	Non-Linear Dose-Response Relationships in Endocrine Disruption John Ashby, Syngenta Central Toxicology Lab, Cheshire, UK
Platform Presentation: Toxicology	Moderator: Louis Anthony Cox, Jr., Cox Associates and University of Colorado, Denver, CO
	Nonlinearity in the IQ-Blood Lead Relation: Redefining Low Level Exposure Richard L. Canfield, Cornell University, Ithaca, NY
	Todd A. Jusko, <i>University of Washington, Seattle, WA</i> Charles R. Henderson, Jr., <i>Cornell University, Ithica, NY</i>
	Non-Linear Dose-Response Relationships in Experimental Neurotoxicology Victor W. Pentreath, University of Salford, Salford, U.K.
	Nonlinear Low-dose Hematotoxicity Louis Anthony Cox, Jr., Cox Associates and University of Colorado, Denver, CO
Platform Presentation: Regulatory Forum on Non-Linear Dose-	Moderator: Myron Harrison, ExxonMobil Corporation, Irving, TX
Response	Chris DeRosa, <i>ATSDR, Atlanta, GA</i> James Muckerheide, <i>Radiation Science and Health, Needham, MA</i>
	Michael Bolger, FDA, Washington, DC Matt Bogdanffy, Dupont, Newark, DE
	Scott Stoner, Department of Environmental Conservation, Albany, NY
Luncheon Speaker: Dr. Joseph Borzelleca Medical College of Virginia, Richmond, VA	You Have a Brain in Your Head, Feet in Your Shoes, Steer Yourself Any Direction You Choose (Dr. Seuss)
Luncheon Speaker: Philip G. Lewis, MD Vice President, Rohm and Haas Company, Bristol, PA	Why the Company Whose Stock You Own Doesn't Care About Risk Assessment
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
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	Ludwig E. Feinendegen, M.D., Heinrich-Heine-University, D.sseldorf, 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., USUHS
	Ralph L. Kodell, Ph.D., NCTR Walter J. Kozumbo, Ph.D., AFOSR/NL
	Shu-Zheng Liu, M.D., MH Radiobiology Research Unit Werner K. Lutz, Ph.D., University of Wuerzburg, Germany
	Harihara M. Mehendale, Ph.D., DABT, Northeast Louisiana University James B. Muckerheide, Director, Center for Nuclear Technology and Society at WPI
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	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., Pfizer
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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

Poster Sessions

The Influence of Lead and Mercury on Beta-Amyloid Aggregation and Cytotoxicity

M.D. Basha, W. Wei & N.H. Zawia, University of Rhode Island, Kingston, RI

Effect of Hydroperoxide and Water Specimens of Different Composition and Physicochemical Properties on the Structure of Membranes and Activity of Membrane Enzymes

Elena B. Burlakova, Alexander N. Goloshchapov, Elena M. Molochkina & Lyudmila D. Fatkhulina, *Emanuel Institute of Biochemical Physics, Moscow, Russia*

Metallothionein as an Adaptive Protein Prevents Diabetes and its Toxicity

Lu Cai, Department of Medicine, University of Louisville, KY

Hormesis at NTP: Evidence of Hormetic Dose Responses in NTP Dose-Range Studies

Edward J. Calabrese & Linda A. Baldwin, University of Massachusetts, Amherst, MA

Effects of Low-Dose Exposures to X-rays on the Non-Specific Anti-Tumor Responses in Mice

A neta Cheda, Jolanta Wrembel-Wargocka, Emil Lisiak, Ewa Nowosielska, Maria Marciniak & Marek K. Janiak, *Military Institute of Hygiene and Epidemiology, Warsaw, Poland*

Experimental Study of Subchronic Toxicity of Lanthanum Nitrate on Liver in Rats

Dong Chen, Ying Liu & Yu-Xiu Nie, Jilin University, Changchun, Jilin, PR China

The Immune Effects of Radiation Observed from the Incident of Co-60 Contaminated Apartments in Taiwan

W.L. Chen, Y.C. Luan, S.H. Mong, J.T. Wu, C.P. Sun & H.Y. Shen, *Nuclear Science & Technology Association, Taipei, Taiwan, ROC, M.C.* Shieh, T.S. Chou, S.T. Chen, K.L Soong, Y.C. Yeh & W.K. Wang, *Nuclear, Biological and Chemical Protection Society, Taipei, Taiwan, ROC, C.M.* Tsai, *Atomic Technology Foundation, Taipei, Taiwan, ROC, M.L.* Shen, *National Taiwan University, Taipei, Taiwan, ROC*

Health Risks from Fluoridated Water

Myron J. Coplan, Intellequity Technology Services, Natick, MA

Secondary Ultraweak Luminescence from Humic Acids Induced by Gamma Radiation

Wieslaw Goraczko & Janusz Slawinski, Poznan University of Technology, Poznan, Poland

Non-Linear Dose Response Relationships in the Definition of Occupational Exposure Limits

Ivo Iavicoli & Giovanni Carelli, Institute of Occupational Health, Universit. Cattolica del Sacro Cuore, Roma, Italy

Heterogeneous Exposure Dose Levels Unable to Induce Harmful Effects of Life Expectancy and Blastomogenesis

Valentina S. Kalistratova, Lev A. Buldakov, Petr G. Nisimov & Irina B. Romanova, State Research Center of Russia, Moscow, Russia

Alcohol and Blood Pressure: a Complex Nonlinear Relationship

Arthur L. Klatsky, MD, Kaiser Permanente Medical Center, Oakland, CA Natalia V. Udaltsova, PhD, Kaiser Permanente Division of Research, Oakland CA

Stress Response and Cellular Longevity: The Prolonged Lifespan of Cushingâs-Syndrome-Patientsâ Fibroblasts

Dimitris Kletsas, Harris Pratsinis, Irene Zervolea & Dimitri Stathakos, *National Centre for Scientific Research ÖDemokritos Ó, Athens, Greece,* Fivos Giannakopoulos, Nikos Thalassinos & Stylianos Tsagarakis, *Evangelismos Hospital, Athens, Greece*

Hormetic Effects at Clinical Levels

Marios Kyriazis MD, British Longevity Society, Hemel Hemsptead, UK

Synergy The Effect of Combining Non-Linear Dose Profiles: The Prediction and Quantification of the Potentiation of EDTA with Antimicrobials

R. J. W. Lambert, R2-Scientific, Sharnbrook, Beds, UK

Stephen P. Denyer & Geoff W. Hanlon, University of Brighton, Brighton, UK

Effect of Single WBI with Low Doses of X-rays on the Development of and Blood Supply to the Pulmonary Tumor Colonies in Mice

Emil Lisiak, Military Institute of Hygiene and Epidemiology, Warsaw, Poland

Miroslaw Dziekiewicz, Clinical Hospital of Military Medical University, Warsaw, Poland

Krzysztof W. Zielinski, Military Medical University, Lodz, Poland

A neta Cheda, Military Institute of Hygiene and Epidemiology, Warsaw, Poland

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Sebastian Dominiak, Military Medical University, Lodz, Poland

Marek K. Janiak, Military Institute of Hygiene and Epidemiology, Warsaw, Poland

Effect of Low and Very Low Doses of Simple Phenolics on Plant Peroxidase Activity

Elzbieta Malarczyk, Janina Kochmanska-Rdest & Marzanna Pazdzioch-Czochra, Maria Curie-Sklodowska University, Lublin, Poland

The Use of Streptolysin O for the Treatment of Scars, Adhesions and Fibrosis

Stephen W. Mamber, Vit Long, Ryan G. Rhodes, Sunthorn Pond-Tor, Lyn R. Wheeler, Kellie Fredericks, Brian Vanscoy, Jean-Frederic Sauniere & John McMichael, Milkhaus Laboratory Inc., Providence, RI Remy Steinschneider & Jean-Claude Laurent, Bio Expertise Technologies, Marseille, France

Comparison in vivo Study of Genotoxic Action of High versus Very Low Dose-Rate g-Irradiation

Andreyan N. Osipov, Moscow SIA ÒRadonÓ, Moscow, Russia

Dmitry Yu. Klokov, Institute of Theoretical and Experimental Biophysics, Moscow Region, Russia

Alexander L. Elakov, Moscow SIA ÒRadonÓ, Moscow, Russia

Olga M. Rozanova & Svetlana I. Zaichkina, Institute of Theoretical and Experimental Biophysics, Moscow Region, Russia

The Use of Low Dose Thimerosal for the Treatment of Herpesvirus Infections

Sunthorn Pond-Tor, Ryan G. Rhodes, Albert E. Dahlberg & John McMichael, Milkhaus Laboratory, Inc., Providence, RI

Effect of Low Dose of Cadmium on Transformation of Normal Human Prostate Cells

N.V. Rajeshkumar, Jaya P. Gaddipati, Jason C. Grove & Radha K. Maheshwari, Uniformed Services University of the Health Sciences, Bethesda, MD Wayne B. Jonas, Samueli Institute for Information Biology, Alexandria, VA

Hormetic Modulation of Aging and Longevity in Fruitflies

Dr. Suraj P. Sharma, Guru Nanak Dev University, Amritsar, India Dr. Suresh I.S. Rattan, *University of Aarhus*, *Aarhus*, *Denmark*

Particulate Matter (PM) Increments may not be Causal in Mortality and Morbidity

Peter A. Valberg, Gradient Corporation, Cambridge, MA

Epidemiological Evaluation of the Threshold Model for Hexavalent Chromium

Edwin van Wijngaarden, Rose S. Luippold & Kenneth A. Mundt, PhD, Applied Epidemiology, Inc., Amherst, MA

Hematopoietic Hormesis and Adaptive Response Induced by LDR is Likely Due to Up-Regulation of Hematopoiesis-related Cytokines

Guangjun Wang, The First Hospital of Jilin University, PR China

Lu Cai, The First Hospital of Jilin University, PR China and University of Louisville, KY

The APP Promoter Responds to Pb Exposure in Transfected PC12 Cells

W. Wei, M.D. Basha & N.H. Zawia, University of Rhode Island, Kingston, RI

Low Doses Gamma-Radiation Induce Non-Linear Dose Response in Mammalian and Plant Cells

Svetlana I. Zaichkina, Olga M. Rozanova, Gella F. Aptikaeva, Asia Ch. Achmadieva & D. Ju Klokov, Institute of Theoretical and Experimental Biophysics, Moscow Region, Russia

Effect of Mixed Rare Earth Changle Crossing Placenta Membrane on Embryo Cell DNA Damage

Li Zhou, Li Shulei & Nie Yuxiu, Jilin University, Changchun, Jilin Province, PR China

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