Society for Risk Analysis
New England Chapter

2014-2015 Event Series

MEETING ANNOUNCEMENT
Wednesday, May 20, 2015
Refreshments: 5:00 pm – 5:30 pm
Presentation: 5:30 pm – 6:00 pm
Discussion: 6:00 – 6:30 pm

How The Linear Dose Response Became The Default Model For Cancer Risk Assessment

Edward J. Calabrese, Ph.D.
Professor of Toxicology, Environmental Health Sciences
University of Massachusetts Amherst

Location
Health Effects Institute
101 Federal Street, Suite 500
Boston, MA 02110-1817

Please RSVP by Friday, May 15th to Aylin Sertkaya (aylin.sertkaya@erg.com).
Space is limited, so reserve your seat today. For more information on SRA-NE, please go to:
www.sra.org/sra-ne.

How The Linear Dose Response Became the Default Model For Cancer Risk Assessment

This presentation provides an historical assessment of how prominent members of the radiation geneticist community from the United States during the 1940s and 1950s successfully worked to establish the acceptance of the linear dose response model in risk assessment, transforming environmental, occupational and medical exposure standards and practices to the present time. It provides detailed documentation that the actions undertaking this policy revolution were ideologically driven, deliberately misleading/deceptive and included misrepresentations of the scientific record. Key activities are described and the role of specific organizations (i.e., Rockefeller Foundation and the National Academy of Sciences), and specific individuals documented. These actions culminated in the U.S. National Academy of Sciences Biological Effects of Atomic Radiation (US NAS BEAR), Genetics Panel report of 1956 which recommended the adoption of the linear dose response for risk assessment, a recommendation that was rapidly and widely adopted. It will be argued that current international cancer risk assessment policies were based on fraudulent actions of the US NAS BEAR I Committee, Genetics Panel and their uncritical acceptance by regulatory agencies and the scientific community.

About the Presenter

Dr. Calabrese has researched extensively in the area of host factors affecting susceptibility to pollutants, and is the author of over 750 papers in scholarly journals, as well as more than 10 books, including *Principles of Animal Extrapolation*; *Nutrition and Environmental Health, Vols. I and II*; *Ecogenetics*; *Multiple Chemical Interaction*; *Air Toxics and Risk Assessment*; and *Biological Effects of Low Level Exposures to Chemical and Radiation*. Along with Mark Mattson (NIH) he is a co-editor of the recently published book entitled *Hormesis: A Revolution in Biology, Toxicology and Medicine*. He has been a member of the U.S. National Academy of Sciences and NATO Countries Safe Drinking Water committees, and on the Board of Scientific Counselors for the Agency for Toxic Substances and Disease Registry (ATSDR). Dr. Calabrese also serves as Chairman of the Biological Effects of Low Level Exposures (BELLE) and as Director of the Northeast Regional Environmental Public Health Center at the University of Massachusetts. Dr. Calabrese was awarded the 2009 Marie Curie Prize for his body of work on hormesis. He was the recipient of the International Society for Cell Communication and Signaling-Springer award for 2010. Dr. Calabrese received an honorary Doctor of Science from McMaster University, Hamilton, Ontario, in 2013.

Over the past 20 years Professor Calabrese has redirected his research to understanding the nature of the dose response in the low dose zone and underlying adaptive explanatory mechanisms. Of particular note is that this research has led to important discoveries which indicate that the most fundamental dose response in toxicology and pharmacology is the hormetic-biphasic dose response relationship. These observations are leading to a major transformation in improving drug discovery, development, and in the efficiency of the clinical trial, as well as the scientific foundations for risk assessment and environmental regulation for radiation and chemicals.

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GETTING TO THE EVENT

By Public Transportation:

Visitors are encouraged to take advantage of the office's proximity to the South Station, Downtown Crossing, and Park Street stops on the MBTA Commuter Rail and Red, Orange, and Green subway lines (See the MBTA trip planner for additional information). Consult the street map to make your way from the nearest MBTA stop to the Health Effects Institute offices. The office is two blocks north of South Station, connecting you to the Red Line, Silver Line and the Commuter Rail. Two blocks to the west is Downtown Crossing, connecting to the Red and Orange Lines. Three blocks to the west is Park Street, connecting to the Green Line.

Driving Directions:

From Logan Airport: Take the Sumner Tunnel to I-93 South, then follow the directions below for From the North. With light traffic, this is a ten-minute trip; at busier times, such as Friday evenings, plan on an hour. The Silver Line bus connects Logan International Airport to South Station, which is two blocks from the office. (See the street map to make your way from South Station to Health Effects Institute).

From the North: From points north of Boston, take I-93 South into the city. After entering the Central Artery Tunnel (the Big Dig), stay to your right, following signs for Exit 23 / Purchase Street and South Station. Take the Purchase Street exit and drive southwest on Purchase Street until you come to Summer Street. Turn right onto Summer Street, and take the second right onto Devonshire Street. Drive down Devonshire until you reach Winthrop square, which is formed by the acute intersection of Devonshire and Otis Streets. As you pass Winthrop square on your left, you will be able to see on your right the Devonshire Street entrance to the 75-101 Federal Street building complex.

From the South: From points south of Boston, take I-93 North into the city. Take the South Station exit, staying to the right for the ramp to downtown Boston / Kneeland Street. At the end of the ramp, take a left onto Kneeland Street. Drive west along Kneeland Street and take your third right onto Lincoln Street. Drive north on Lincoln Street for 4-5 blocks until you come to Summer Street. At Summer Street, take a left and then an immediate right onto Devonshire Street. Follow the directions above from Devonshire Street to the office.

From the West: Take the Mass Pike (I-90) east to Exit 24 A-B-C. Exit to the left, following the signs for I-93/South Station/Quincy. Take Exit 24-A to South Station, staying to the right for the ramp for downtown Boston / Kneeland Street. At the end of the ramp, take a left onto Kneeland Street. Follow the directions above from Kneeland Street to the office.

Parking

There is a public garage that abuts 101 Federal Street. The entrance to the garage is on your right side just before 101 Federal Street. (See the street map for additional details)