

ISEA 2007 PANEL DISCUSSION:
**"The Path Forward in Disaster Preparedness Since WTC -
Exposure Characterization and Mitigation:
Substantial Unfinished Business!"**

A blue ribbon, expert panel has been assembled to discuss the key human exposure issues still remaining to be fully addressed following learning experiences from recent large and small intentional, accidental, and natural US disasters. The panel will bring together a range of viewpoints from exposure scientists to health professionals at the coming International Society for Exposure Analysis (ISEA) conference in Durham, NC on Monday, October 15, 2007. The focus will be a prospective review of our current readiness to make the critical exposure assessment decisions that would adequately protect both responders and the public when natural or manmade disasters strike. The most important panel findings will help define the state-of-the-art and assist in the planning of a upcoming ISEA conference targeted to emergency preparedness exposure topics.

Academic and private research professionals will discuss what we have learned from recent large and small disasters including the significant knowledge gaps that remain, with their counterparts in Federal agencies charged with emergency preparedness and protecting human health. Key representatives from NIOSH, EPA, and the Department of Homeland Security will address disaster exposure issues raised by professionals representing the Exposure and Occupational Health Sciences Institute at Robert Wood Johnson Med. Scholl and Rutgers U., RTI International, the University of Pittsburg Graduate School of Public Health, NY University Medical Center, and the Johns Hopkins Bloomberg School of Public Health. A Congressional perspective will be provided in a keynote address to the panel (Congressional schedule permitting) by the Honorable David E. Price, US House subcommittee chair for Homeland Security appropriations.

The panel will be seeking answers to key questions such as:

- *How should we evaluate past inadequacies, establish credible, realistic exposure-response evaluations for the future, and develop effective prevention strategies, including how to avoid exposures or when and where respirator use is mandatory for the local community as well as responders?*
- *Are we indeed moving forward from the experiences of mega-scale disasters such as World Trade Center (WTC) and Katrina, as well as much smaller-scale disasters that are more likely to occur in the future in North Carolina and across the US?*
- *How well are we now prepared to characterize exposures during and in the aftermath of disasters, compared to our readiness prior to WTC or Katrina?*
- *Have we really moved forward in our ability to protect responders?*
- *Do we now have the tools needed to characterize responder and the public's exposures and make timely judgments to keep them from harms way?*
- *What are the best ways to advance exposure science to better address future disasters?*
- *How adequate is our current disaster preparedness tool box for exposure assessments?*
- *And critically, how do we support new exposure research initiatives to provide the best possible protection of health for the community and responders from future disasters?*

September 5, 2007

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Join us on Monday, October 15th, 2007 in Durham at the ISEA conference for a panel discussion that promises to be both thought provoking and suggesting the way the forward. For more information on this panel, and how to attend, see: <http://secure.awma.org/events/ISEA/panel.htm> or contact Dr. Nicolle Tulve, ph. 919-541-1077 or email: tulve.nicolle@epa.gov.

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Additional Information

The 9/11/01 disaster at the World Trade Center in New York City captured and held the spotlight in the lay and technical press like no other single event in modern times. The attacks were devastating, and their environmental consequences and health effects continue to be experienced by the many brave people and the families of those who struggled to rescue the injured and recover the dead from that tragic site. The post-analyses of the health and environmental consequences have rightfully dominated these discussions as of late and are gradually allowing a more thoughtful appreciation of the event itself as we learn more about the exposures faced by those who worked and lived near the scene.

Unfortunately, the lack of adequate scientific knowledge to assess those exposures may prevent us from ever fully assessing the causality or understanding the health consequences of those exposures. Because federal officials continue to remind us that it is not a matter of if but when another disaster will occur, it is time to address this shortcoming in our homeland security planning and technologies.

A recent paper (Lioy, Pellizzari and Prezant, *ES&T*, 2006) reviewed the WTC experience from the perspective of "learning through human-exposure science", and suggested that a number of critical exposure science research needs have yet to be addressed to produce a suitably robust disaster preparedness toolbox. They framed the issue and challenges as "*how to evaluate past inadequacies, establish credible, realistic exposure-response evaluations for the future, and develop effective prevention strategies, including when and where to consider options such as avoidance measures or respirator use for both the public and responders.*"

The adequacy of our 2007 exposure characterization and mitigation toolbox could be highlighted by considering a much smaller, but more contemporary disaster, with the inadequacies identified for the WTC disaster. A huge fire at a hazardous waste facility in Apex, NC in October, 2006 destroyed the facility and its contents and posed potentially severe community and responder acute exposures. Five years after the WTC disaster, were we really better prepared to characterize disaster exposures and protect the public and responders with appropriate mitigation and avoidance tools? Adverse health outcomes from the initial minutes and hours of the Apex disaster resulted in avoidable acute exposures for both the public and responders. The adequacy of subsequent chronic exposure estimates for the public also raised concern that short and long-term health risks were uncertain.

PANEL PARTICIPANTS

Co-Chairs:

Charles E. Rodes, PhD RTI International, Center for Aerosol Technology, moderator and
Michael J. Dellarco, USEPA, rapporteur

Keynote Presentation:

Honorable David E. Price, NC 4th district representative, chair, Homeland Security house appropriations subcommittee - pending Congressional schedule.

Presenters:

Paul J. Liroy, PhD, EOHSI/UMDNJ, WTC implications and resulting policy and science recommendations; **Edo D. Pellizzari, PhD**, RTI, acute and chronic stressor exposure issues, **Dori B. Reissman, MD**, CDC/NIOSH, defining responder exposures and linking to personal protection requirements, **(to be announced)**, USEPA, defining community exposures and linking to protection requirements, **Mitchell Erickson, PhD**, DHS/EML, exposure characterization needs for threat scenarios.

Discussants:

Bernard D. Goldstein, MD, UPitt/Graduate SPH, **Morton Lippmann, PhD**, NYU Medical Center, and **Thomas A. Burke, PhD**, Bloomberg SPH, Johns Hopkins,