

The Joint U.S. Environmental Protection Agency and Department of Homeland Security Conference on Real-World Applications and Solutions for Microbial Risk Assessment

Bethesda North Marriott Hotel and Conference Center
April 8 – 10, 2008

Agenda

This conference will provide a forum to discuss real-world applications and proposed approaches to the methodological challenges in the search for improved methods to assess risk of exposure to biological agents after a deliberate, natural, or accidental contamination event. The overall objective is to provide enhanced tools and approaches to better identify the causative agent, assess degree of exposure and resultant health impacts, mitigate resultant consequences to the degree possible, and accomplish cost-effective cleanup and recovery.

Purpose of the Meeting:

1. To facilitate collaboration and cooperation among scientists and policymakers from academia, private-sector organizations, the U.S. Environmental Protection Agency (EPA), Department of Homeland Security (DHS) and other vested federal agencies, Department of Defense (DOD), states, local agencies, and stakeholders in efforts to advance the Microbial Risk Assessment (MRA) field of study.
2. To provide an opportunity for consortium members of the Center for Advancing Microbial Risk Assessment (CAMRA), an EPA/DHS Sponsored University-based Center of Excellence, to present the results of their research.
3. To assist EPA and DHS in identifying needed research, methods, or technologies important to addressing decisions and/or policy-making issues associated with the assessment of the risk of exposure to biological contaminants of concern.

Tuesday, April 8, 2008

8:00 – 9:00 a.m. **Registration and Poster Setup**

Session I: Context and Overview

9:00 – 9:10 a.m. **Welcome and Goals for the Conference**
*Irwin Baumel, EPA, Office of Research and Development (ORD),
National Center for Environmental Research (NCER)*

9:10 – 9:30 a.m. **Overview of MRA Activities in EPA's Office of Research and
Development**
George Gray, Assistant Administrator, EPA, ORD

9:30 – 9:50 a.m. **Overview of DHS Science and Technology Directorate**
Beth George, DHS

Tuesday, April 8, 2008 (continued)

- 9:50 – 10:10 a.m. **Overview of MRA Activities in EPA’s National Homeland Security Research Center**
Jon Herrmann, Director, EPA, ORD, National Homeland Security Research Center (NHSRC)
- 10:10 – 10:30 a.m. **Weapon Potential of a Microbe**
Keynote Speaker: *Arturo Casadevall, Albert Einstein College of Medicine*
- 10:30 – 11:00 a.m. **Break**

Session II: Microbial Risk Assessment (MRA) Challenges

- 11:00 – 11:20 a.m. **Introduction and Overall Challenges to MRA**
Tonya Nichols, EPA, ORD, NHSRC
- 11:20 – 11:40 a.m. **Interagency MRA Guidelines**
Mike Broder, EPA, Risk Assessment Forum
- 11:40 a.m. – 12:00 p.m. **DHS Centers Addressing Biological Threats**
Elizabeth Filauri, DHS
- 12:00 – 1:00 p.m. **Lunch (on your own)**

Session III: Mission-Directed Applications of MRA

- 1:00 – 1:20 p.m. **MRA Activities Within the S&T Division**
Beth George, DHS
- 1:20 – 1:40 p.m. **MRA Activities and Application Within the Food Safety and Inspection Service (FSIS)**
Janell Kause, U.S. Department of Agriculture (USDA), FSIS
- 1:40 – 2:00 p.m. **MRA Activities Within the FDA**
Sherri Dennis, U.S. Food and Drug Administration (FDA)
- 2:00 – 2:20 p.m. **MRA Activities Within the Centers for Disease Control and Prevention (CDC)**
Rebecca Noe, CDC
- 2:20 – 2:40 p.m. **MRA and Development of Cleanup Goals**
Deborah McKean, EPA, ORD, NHSRC
- 2:40 – 3:20 p.m. **Break**
- 3:20 – 3:40 p.m. **Office of Water (OW) Research To Advance MRA Capabilities To Assess Risk of Exposure to Waterborne Pathogens**
Steve Schaub, EPA, OW

Tuesday, April 8, 2008 (continued)

- 3:40 – 4:00 p.m. **MRA Activities for the Development of Drinking Water Standards**
Nick Ashbolt, EPA, ORD, National Exposure Research Laboratory (NERL)
- 4:00 – 4:15 p.m. **Center for Advancing Microbial Risk Assessment (CAMRA) Overview and Introduction to Poster and Technical Sessions**
Chuck Haas, CAMRA
- 4:15 – 6:00 p.m. **Poster Presentations**
Posters will be available on all 3 days.

Wednesday, April 9, 2008

Technical Program – Data Needs and Research in MRA

Session I: Biological Hazard ID

- 8:30 – 8:50 a.m. **Challenges in Biological Hazard ID**
Alan Lindquist, EPA, ORD, NHSRC
- 8:50 – 9:10 a.m. **Evaluation of Quantum Dots as Surrogates for Pathogens**
Syed Hashsham, CAMRA
- 9:10 – 9:30 a.m. **Standardization of LRN Assays for Biothreat Agent ID**
Stephen Morse, CDC
- 9:30 – 9:50 a.m. **Bioforensic Analysis: Obtaining a Biological Fingerprint**
Sonia Hunt, Federal Bureau of Investigation (FBI)
- 9:50 – 10:20 a.m. **Break**

Session II: Challenges in Exposure Assessment

- 10:20 – 10:40 a.m. **How Sampling Methods Influence Overall Exposure Assessment**
Dino Mattorano, EPA, National Decon Team (NDT)
- 10:40 – 11:00 a.m. **Factors Affecting the Persistence of Pathogens on Fomites**
Ryan Sinclair, CAMRA
- 11:00 – 11:20 a.m. **An Emerging Science of an Environmental Infection Transmission System**
Jim Koopman, CAMRA

Wednesday, April 9, 2008 (continued)

- 11:20 – 11:40 a.m. **New Approaches to Microbial Exposure Assessment**
Al Dufour, EPA, ORD, NERL
- 11:40 a.m. – 12:00 p.m. **Background Studies Underscore the Challenge of Designing Assays To Support Biosurveillance**
Norman Doggett, Los Alamos National Laboratory (LANL)
- 12:00 – 1:00 p.m. **Lunch** (on your own)
- 1:00 – 1:20 p.m. **Improvement of Water Quality Modeling for MRA**
Chris Choi, CAMRA
- 1:20 – 1:40 p.m. **TEVA Modeling for Water Distribution Systems**
Regan Murray, EPA, ORD, NHSRC

Session III: Bridging the Gaps in Dose Response

- 1:40 – 2:00 p.m. **Challenges in Dose-Response Assessments**
Jeff Swartout, EPA, ORD, NCEA
- 2:00 – 2:20 p.m. **New Dose-Response Models for Key Class A Agents**
Chuck Hass, CAMRA
- 2:20 – 2:40 p.m. **Effect of Ongoing Exposure Dynamics in Dose-Response Relationships**
Joe Eisenberg, CAMRA
- 2:40 – 3:20 p.m. **Break**
- 3:20 – 3:40 p.m. **PB/BK Modeling of Low-Dose Infectivity for Inhalational Anthrax**
Brad Gutting, Naval Surface Warfare Center (NSWC), Dahlgren
- 3:40 – 4:00 p.m. **Old Data Provide New Dose-Response Curves for Anthrax**
Brandolyn Thran, U.S. Army Center for Health Promotion and Preventive Medicine (USACHPPM)
- 4:00 – 4:20 p.m. **Listeria Dose-Response Assessment**
Heejeong Latimer, USDA, FSIS

Thursday, April 10, 2008

Continuation of the Technical Program

Session IV: Risk Characterization

- 8:30 – 9:00 a.m. **Decision Making Under Uncertainty**
George Gray, Assistant Administrator, EPA, ORD
- 9:00 – 9:20 a.m. **Probabilistic Modeling for Biothreat Assessments**
Steve Bennett, DHS
- 9:20 – 9:40 a.m. **Risk Characterization and Applications**
Carl Schroeder, USDA, FSIS
- 9:40 – 10:00 a.m. **Risk Estimates for Tuberculosis**
Tim Bartrand, CAMRA
- 10:00 – 10:30 a.m. **Break**

Session V: Risk Perception and Risk Communication

- 10:30 – 10:50 a.m. **Challenges in Risk Communication**
Rebecca Parkin, George Washington University
- 10:50 – 11:10 a.m. **Risk Communication Planning for the Aftermath of a Plague Bioattack**
Lis Casman, CAMRA

Session VI: Panel on Future Direction

- 11:10 a.m. – 12:00 p.m. **Discussion of Conference and Way Forward**
Stephen Morse, CDC
Chuck Haas, CAMRA
Alan Lindquist, EPA
Steve Schaub, EPA
Steve Bennett, DHS
Carl Schroeder, USDA
- 12:00 – 12:15 p.m. **Closing Remarks**
Irwin Baumel, EPA, ORD, NCER
- 12:15 p.m. **Adjournment**