

Overview of Meeting Outcomes



On May 19 & 20, 2005, at the Niagara Falls Conference Center [Niagara Falls, NY], the Industry/University Center for Biosurfaces hosted a workshop on ...

Controlling Fine-Particle Risks to Our Bodies, Homes, Workplaces, Schools, and Clinics

This workshop was part of the planning process of an Industry/University Cooperative Research program sponsored by the U.S. National Science Foundation at University at Buffalo and The University of Memphis, in cooperation with the STAR Environmental Quality Systems Center sponsored by the New York State Office of Science, Technology and Academic Research.

The Meeting Objective ...



was to **Develop & Refine the Research Prospectus** for 2005-2009, expanding into new topics, to include bioaerosols, diesel exhaust, respiratory consequences, school bus emissions, infection-control measures, free radical reactions of particles in living tissues, and more.

There was good Level-of-Interest and Feedback from Attendees.

Industry, government agency, health care facility and faculty participants recommended focus on development of the basic science aspects of air-quality-control treatment and monitoring techniques, in close cooperation with the Syracuse Center of Excellence in Environmental and Energy Systems sponsored by the New York State Office of Science, Technology and Academic Research.

The focus topics are to include VOCs (Volatile Organic Compounds) and bioaerosols, with emphasis on discerning the effectiveness of specific “unit operations” claimed to be effective in neutralizing/disinfecting such threat substances predominantly in indoor settings. Additional emphasis is to be placed on discerning the influences of outdoor air quality and traffic sources on indoor air quality and the health-related consequences of the various threats and treatments considered, without regard to specific commercial devices incorporating one or more of the proposed countermeasures or air-purification methods.

Further development of this program will be reported at <http://www.buffalo.edu/faculty/research/iucb>

Here is a review of the completed Industry/University Center for Biosurfaces [IUCB] meeting Agenda:

TECHNOLOGY ROADMAP: Critical Particle Controls

- Who?* → stakeholders needing to control biological responses to fine particles
When? → May 19 & 20, 2005 (Thursday/Friday)
Where? → Niagara Falls Conference Center (Niagara Falls, NY)
Why? → Prioritization of IUCB's research agenda for 2005-2009
What? → Bioaerosols; indoor environmental quality issues; free radical reactions of particles in living tissues; diesel exhaust and respiratory consequences; infection control; homeland defense; hospital & clinical air quality; collective protection



May 19, 2005 (Thursday)

...beginning with Lunch, all attendees engaged in mutual **introductions** and presentation of **expectations**... the formal sessions began with a **WELCOME** from Industry Advisory Board Chairman, *Jack Barrett* [NIEQRI, Inc.], and was followed by a proposed Design of a Massively-Parallel Multi-Threat **Live Agent Aerosol** Detoxification Experiment in a **600 Cubic Meter** Instrumented Test Chamber, by *Robert Baier* [Executive Director of IUCB]



...U.S. National Science Foundation Participation was described by *Alex Schwarzkopf* [Senior Program Director, NSF I/UCRC Programs], and was followed by a description of formal program Evaluation via the Industry/University Feedback Loop, by *Edward Zablocki* [IUCB Evaluator; UB Office of the V.P. for Research]

...following a Hospitality Break, the group engaged in reviews of the Center's Unique Tools Available: Integrated **Virus** Detection System; COAST II **Bioaerosol** Collector; Montana Portable **Emission** Monitoring System; Infrared Impactor Particle **Speciation**; **Aircuity** Expert System; ASAP, **Autonomous Sampling** Aerosol System; and more

...Dr. Ed Bogucz, Executive Director of the Syracuse Center of Excellence, then described New York State participation through its 12-member consortium [NY STAR Center for Environmental Quality Systems], leading to **Open Discussion/planning for optimum experimental design** before the evening reception and networking.



May 20, 2005 (Friday)

Friday Morning's session began with short presentations on a series of proposed faculty research projects, under the general heading "**Living Systems: Where are we? Where we are going?**"

Histopathology of Particle-instilled Rat Lungs

Peter Nickerson [Professor of Pathology, University at Buffalo]

Confocal Microscopy and Spectroscopy of Particles in Alveolar Macrophages

Robert Baier [Professor of Biomaterials, University at Buffalo]

Particulate Wear Debris from Radiation- Sterilized Implants

Shah Jahan [Professor of Physics and Director, IUCB University of Memphis site]

Atomic Force Microscope Investigations

Sanjay Mishra [Assistant Professor of Physics, University of Memphis]

Cellular Influences on Surface Oxides and Corrosion

Joel Bumgardner [Associate Professor of Biomedical Engineering, University of Memphis]

Bioinvasive Microbes, Medical Air Debris, and Optical Tweezer Studies

Anne Meyer [Research Associate Professor and Director, IUCB/University at Buffalo site]

... This session was followed by refreshments and Facilitated Discussion and **LIFE Form** [Level of Interest, Feedback and Evaluation] completion **to focus and define priority projects** for Center's 2005-2009 research agenda, considering potential for industry "buy-in" to a mutual-benefit, managed research program.

... At Lunch, there was an introduction of a potential 3rd Research Site at University of Illinois/Chicago *proposed by Farid Amirouche, Professor, UIC*

... Finally, a Feedback Session provided **structured**, open **discussion** based on the LIFE form responses collected earlier in the workshop, **prioritizing** strawman **projects** and **timelines**.

... From these events, a Draft Gantt Chart Development process is currently in progress, including initial investment targets to identify funding needs and opportunities.

... A closing meeting of NSF Representatives with the IUCB Board Chair led to Advisory Board instructions to university Center Directors and Faculty on how to proceed toward the next year's Center operations plan, now in development.

IUCB Contact for further information on this Workshop: baier@buffalo.edu phone: 716-829-3560



Thank you... to all the conference participants who helped "hatch" this new program for IUCB:

Austin Air, Inc.; Buffalo Filter; Clean Air Technologies International, Inc.; Failsafe Air Safety Systems; FP Technologies, Inc.; Indoor Air Professionals; MGA Research Corporation; NIEQRI, Inc.; Pharmax Ltd.; Pure Allergy Friendly Rooms; RCS Performance Systems, Inc.; Second Wind; Tall Oak Research; TSI, Inc.; Veritay Technology, Inc.; Washington Hospital Center; Women's Board of Millard Fillmore Suburban Hospital; National Science Foundation; Syracuse University; University of Illinois/Chicago; The University of Memphis; and University at Buffalo.