ABSA

55th Annual Biological Safety Conference

Hilton Bonnet Creek Resort • Orlando, Florida • October 19-24, 2012

PRELIMINARY PROGRAM

www.absaconference.org

55th Annual Biological Safety Conference

Special Event—Dinner and Dancing
SeaWorld Orlando is the hottest ticket on Tuesday night, October 23, 2012. Come join your fellow ABSA members at the world's premier marine adventure park with world-class shows, thrilling rides, and unforgettable animal encounters! The event will start with the exciting Blue Horizons Show featuring dolphins, whales, and tropical birds courtesy of Germfree Laboratories. We will be visiting the Key West area at Sea World where we will have the opportunity to touch a stingray and view dolphins up-close while listening to the sounds of a steel drum band. The buffet menu will include a variety of land and sea selections and, for the thrill-seekers among us, dessert will be served next to the park's new breed of mega attractions—**The Manta**. This ride combines the best of the sea and the sky, immersing riders in the beautiful and mysterious world of rays and then taking them for a flying rollercoaster thrill-ride aboard the biggest ray of them all. So come join us for a great time!

Award Presentations
Monday, 8:30 am—Arnold G. Wedum Memorial Lecture Award
Tuesday, 8:05 am—Griffin Foundation Award and Lecture
Tuesday, 1:45 pm—Eagleson Award and Lecture
Wednesday, 1:30 pm—Richard Knudsen Award
Wednesday, 11:35 am—Arnold G. Wedum Distinguished Achievement Award
Wednesday, 11:35 am—Everett J. Hanel, Jr. Presidential Award

Registration
The Registration Desk will be open Friday through Wednesday from 7:00 am - 5:00 pm.

New Member Reception
The reception for new members will be held Sunday from 5:30 - 6:30 pm.

Opening Reception
The Opening Reception will be held Sunday from 6:30 - 8:00 pm.

Hotel Information
Hilton Orlando Bonnet Creek
14100 Bonnet Creek Resort Lane
Orlando, FL 32831
407-597-3600
Fax: 407-597-3601

Exhibit Hall
The exhibit hall will be open on Sunday from 6:30 - 8:00 pm showcasing the latest in laboratory biosafety products and services. It will also be open on Monday and Tuesday from 7:00 am - 4:00 pm. Continental breakfasts, lunches, and breaks will be served in the exhibit hall.

Preconference Courses

Please visit our web site for course availability.
www.absaconference.org

Friday, October 19, 2012

8:00 am - 5:00 pm

1. Infectious Substance Shipping Certification

Eric Cook, MPH, CBSP, Sandia National Laboratories, Albuquerque, NM

This course is appropriate for those who have some experience with infectious substance handling or shipping but may not have been certified within the past 3 years. The course utilizes several facilitated and class learning activities such as group discussions and interactive exercises focused on the essential areas of infectious substance shipping. Participants will have the opportunity to mark, label, package, and complete documentation for a variety of infectious substances shipments (Category A, Category B, and Exempt Patient Specimens). Participants will review applicable regulations with a focus on IATA. This course is appropriate for those responsible for packaging, marking, and labeling shipments of all categories of infectious substances, dry ice, and liquid nitrogen. A final written certification exam will be administered. Participants must score at least 70% in order to be certified.

Objectives:

- Recall information about U.S. and international regulations that affect shippers of infectious substances
- Practice the proper way to package, mark, label, and prepare shipments of infectious substances, Category A, Category B, and exempt including over packs, dry ice, and liquid nitrogen
- Accurately complete relevant paperwork associated with infectious substance shipping (shipper's declaration, airway bill, etc.)
- Recognize program management issues such as who needs to be trained on what and how often, import and export requirements, authorizing shipments, select agent rules, MOUs, etc.

Suggested Background: None
Target Audience: All Safety Professionals, Laboratory Workers, New Biosafety Professionals
Audience Level: Basic

8:00 am - 5:00 pm

2. Fundamentals of Biosafety

Raymond W. Hackney, DrPH, CBSP, Duke University, Durham, NC
Janice Flesher, SM(NRCM), CBSP, GlaxoSmithKline Biologicals, Marietta, PA

This course will teach the basic principles of biosafety and biotechnology. Although specific biohazards will be discussed, emphasis will be directed toward the development of risk assessment skills whereby the participant develops the ability to recognize, evaluate, and control occupational biohazards. Relevant regulatory requirements are addressed to the extent that the participant is introduced to new and existing mandates. An in-depth discussion of methods used to control biohazard exposure will be presented including work practices and engineering controls. Handling of biohazardous materials will be discussed including disinfection, spill cleanup, and waste management. A basic introduction to biotechnology with emphasis on molecular biology, recombinant DNA, and viral vectors will also be provided.

Objectives:

- Describe the classes and basic characteristics of microorganisms
- Identify five routes of transmission that can occur in laboratories
- Describe the work practices, safety equipment, and facility requirements for biosafety levels 1 through 4
- Describe through risk assessment what biosafety levels are appropriate for specific infectious agents
- Identify the appropriate type of Class II biological safety cabinets for specific applications
- Verify appropriate disinfectants for specific applications

Suggested Background: None
Target Audience: New Biosafety Professionals, Laboratory Workers, All Safety Professionals
Audience Level: Basic

8:00 am - 5:00 pm

3. Introduction to Biological Risk Assessment

Elizabeth Weirich, CBSP, Centers for Disease Control and Prevention, Atlanta, GA
Patrick Condreay, PhD, GlaxoSmithKline R&D, Research Triangle Park, NC
Anne-Sophie Brocard, PhD, RBP, CBSP, University of Texas Medical Branch, Galveston, TX

Rapid scientific and technological advances continue to challenge the biosafety community in determining and establishing the appropriate practices and containment necessary to avoid exposure to the wide array of hazardous biological agents and materials found in the laboratory today. This introductory course will provide an opportunity to incorporate the basic knowledge and skills necessary in order to perform risk assessments for working safely with pathogens (human, animal, or plant) and rDNA (genetically modified organisms or viral vectors). Using case studies, participants will work together to conduct risk assessments by determining the hazards involved; the appropriate questions to ask to address the potential risks associated with the intended activities; and then make recommendations on appropriate containment and practices required to work safely. The conclusions of the groups will be presented. Participants are expected to have a basic knowledge of microbiology and biosafety (containment facilities and practices).

Objectives:

- Identify and list determinants for assessing risk (host, environment, agent)
- Complete the steps of a risk assessment
- Determine steps to manage risk (mitigation)
- Identify resources and references for risk assessment/management

Suggested Background: Fundamentals of Biosafety
Target Audience: New Biosafety Professionals
Audience Level: Basic

8:00 am - 5:00 pm

4. Biosafety Management Techniques for Improving Organization Program Understanding and Support

Robert Emery, DrPH, RBP, CBSP, University of Texas—Houston, Houston, TX
Bruce Brown, MPH, CBSP, University of Texas—Houston, Houston, TX

A recurrent challenge for biosafety professionals is the ability to garner necessary program resources. This difficulty lies in the fact that, on a good day in the world of biosafety, nothing happens, so upper management may not fully appreciate or understand all of the effort that went into making nothing happen. Biosafety professionals in particular experience difficulty in this regard because many in the profession have received intensive training in the biological sciences, but little or no training in the area of program management. This course will focus on key management techniques that can be used within biosafety programs to help improve stakeholder understanding of the program and its activities. Real-world examples of successful applications will be discussed.

Objectives:

- Identify various biosafety programmatic measures and metrics that can be easily captured and communicated
- Define the techniques that can be used for displaying biosafety data in ways that others can readily understand and appreciate it
- Describe how biosafety programs can assist with other basic safety program needs to help avoid program duplication of efforts and improve safety and client satisfaction levels
- Employ various commonly used methods to improve the visibly and support for their biosafety programs

Suggested Background: None
Target Audience: All Safety Professionals, Experienced Biosafety Professionals, New Biosafety Professionals
Audience Level: Basic/Intermediate

8:00 am - 5:00 pm

5. Fundamentals of the Class III Biosafety Cabinet

David Bressler, CBSP, Centers for Disease Control and Prevention, Atlanta, GA
Robert Hawley, PhD, RBP, CBSP, Frederick, MD

This course is designed to provide an overview of the history, function, design, maintenance, and operational safety considerations of Class III biosafety cabinets. Class III cabinets have found new relevance as a tool for public health and other microbiological laboratories in an era of all hazards preparedness, bioterrorism, and pharmaceutical production capacity. This type of biological safety cabinet provides a controlled environment for working with high hazard chemical and biological materials as well as the maximum amount of personnel and environmental protection, if they are used and maintained properly. This course will be held offsite at a local manufacturer of Class III cabinets to facilitate interactive learning sessions. Transportation will be provided.

Objectives:

- Describe the basic function and purpose of a Class III biosafety cabinet
- Discuss at least two components of a Class III biosafety cabinet and the advantages and disadvantages of working with this type of equipment
- Interact with manufacturers of this type of equipment and be able to discuss the considerations for their own institutional usage

Suggested Background: Fundamentals of Biosafety, Risk Assessment, Biosafety Level 3 Operations
Target Audience: Laboratory Workers, Experienced Biosafety Professionals, High- and Maximum-containment Facility Engineers
Audience Level: Intermediate

1:00 - 5:00 pm

6. Physical Security for Bioscience Laboratories

Lora Grainger, PhD, Sandia National Laboratories, Albuquerque, NM
Jennifer Gaudioso, PhD, Sandia National Laboratories, Albuquerque, NM
Thamer Imran, Sandia National Laboratories, Albuquerque, NM

This course will focus on implementing physical security as an aspect of a laboratory biosecurity program. It is designed to introduce biosafety officers, Responsible Officials, and laboratorians to physical security concepts. At the end of the class, participants will have basic knowledge and vocabulary to enable them to communicate more effectively with physical security specialists. Topics that will be addressed include protection strategies, access controls, intrusion detection, alarm communication and assessment, and alarm response. This course will include case studies and exercises, and discuss general physical protection strategies (not U.S. select agent regulations).

Objectives:

- Recognize basic physical security concepts enabling participants to communicate more effectively with physical security specialists
- Demonstrate how to protect assets of different risks through graded protection strategies
- Discuss physical security technologies, emphasizing pros and cons of specific technologies for bioscience laboratories

Suggested Background: Overview of Principals of Laboratory Security or familiarity with basic concepts of laboratory biosecurity
Target Audience: All Safety Professionals, Laboratory Workers
Audience Level: Basic

Saturday, October 20, 2012

8:00 am - 5:00 pm

7. Concepts of Virology and Virus-based Gene Vectors

Patrick Condreay, PhD, GlaxoSmithKline R&D, Research Triangle Park, NC

The first section of this course will introduce some concepts of gene expression and review basic virology with a focus on the characteristics of viral families, viral replication strategies, pathogenesis and persistence, and anti-viral intervention. The second section will examine gene expression technology and principles of viral vector use before exploring characteristics of viral systems that are commonly used as gene delivery vectors in biomedical research. The material is targeted for the biosafety professional who does not actively conduct laboratory research, yet wishes to acquire a basic knowledge of virology and recombinant viral vectors. Participants should be familiar with molecular biology.

Objectives:

- Express a familiarity with the molecules and communicate the basic processes involved in recombinant gene expression
- Define basic concepts of virology
- Recognize the characteristics of viral systems that are used as gene delivery vehicles
- Apply the knowledge of basic virology and characteristics of viral vector systems to risk assessment of recombinant viruses and protocols involving them

Suggested Background: Risk Assessment, Microbiology and Molecular Biology 101, Principles and Practices of Biosafety
Target Audience: All Safety Professionals, Experienced Biosafety Professionals
Audience Level: Intermediate

8:00 am - 5:00 pm

8. BSL-3 Operations and Management

Domenica Zimmerman, University of Texas Medical Branch, Galveston, TX
J. Paul Jennette, RBP, Cornell College of Veterinary Medicine, Ithaca, NY

This course will review the important aspects of the daily operation of a BSL-3 facility from two points of view; management of the facility and daily operations. This assumes that you already have a facility built and have all required authorizations to work in it. The course will cover the different aspects you need to consider to operate a BSL-3 facility such as approval of a worker, training of workers and maintenance support, occupational health issues, managing waste, maintenance of the HVAC and physical facility, periodic checks on the facility's systems, and emergencies of different types. It will also cover daily operations in a BSL-3 such as understanding when it is safe to enter and when you need to evacuate the facility, what to do when the ventilation fails, practical aspects of entry and exit procedures, practical tips on selection and use of PPE, safety considerations within the experimental SOPs, waste handling, facility's cleaning, and how to have equipment repaired or serviced. The class will be conducted in a way that allows for interaction and exchange of experiences between participants and instructors. This course will not cover regulatory aspects from specific countries.

Objectives:

- Describe elements of annual verification, emergency response, etc.
- Recognize institutional responsibilities from management to user
- Describe methods to develop manuals, SOPs, and training

Suggested Background: Basic understanding of risk assessment and biosafety principles
Target Audience: All Safety Professionals
Audience Level: Basic

8:00 am - 5:00 pm

9. Engineering for the Biosafety Professional

Theodore J. Traum, PE, World BioHazTec Corporation, Rockville, MD
Juan Osorio, World BioHazTec Corporation, Rockville, MD

Proactive biosafety professionals need to be involved and knowledgeable in the operation, maintenance, and certification of their containment facilities and building systems. Frequently, the biosafety professional is called upon to participate in the planning, design, and validation of a new biocontainment laboratory or renovation of an existing facility. The biosafety professional's training and experience is usually limited to the sciences and often lacks the knowledge of basic engineering principles. This course is intended to provide basic engineering principles that are useful in the planning, design, maintenance, and certification of containment facilities. The objective of this course is to equip the biosafety professional with the engineering tools to understand biocontainment planning, design, construction, maintenance, and operation activities. For the biosafety professional to participate in these activities, basic knowledge and understanding, development of skills to ask questions in engineering terms and the confidence to question the answers is needed. The course will provide information relevant to BSL-3 facilities for the determination of air change rates, interpretation of drawing schematics relating to containment supply and exhaust systems, an introduction in determining room heat loads and ventilation rates, concepts in directional airflow and room pressure differentials, ductwork distribution design and components, HEPA filtration, HVAC control issues, electrical power, lighting, and signal systems. Building on this information, there will be a step-by-step presentation on planning a laboratory, certification, maintenance, and operation. At the course's conclusion, the participants will have the knowledge to better understand engineering issues in the design of biocontainment facilities, be able to formulate informed questions, understand the certification process, be able to interact with maintenance personnel and integrate facility operations with the biosafety program.

Objectives:

- Recognize engineering issues in the design of biocontainment facilities
- Formulate informed questions in engineering terms and have the confidence to question the answers
- Interact with maintenance personnel and integrate facility operations with the biosafety program
- Explain the certification process

Suggested Background: None
Target Audience: New Biosafety Professionals, Experienced Biosafety Professionals, Operations and Maintenance Personnel
Audience Level: Basic

8:00 am - 5:00 pm

10. Designing Training Programs for a Biosafety Environment

Vibeke Halkjaer-Knudsen, PhD, Sandia National Laboratories, Albuquerque, NM
Lora Grainger, PhD, Sandia National Laboratories, Albuquerque, NM

This course will give participants the insight and basis for tailoring a training program specifically to the hazards and biorisks for their respective institutions. The focus will be on overcoming the unique challenges involved with teaching adults including an introduction to the theory and psychology behind effective training for adult learners. The course will also cover strategies for working with differing levels of preexisting knowledge and educational levels. Different training methods will be utilized and discussed while addressing learning preferences (visual, auditory, and kinesthetic) with the purpose of understanding each method. Discussions will be held regarding methods suitable for large or small groups, learning retention, and the overall usability for the biosafety and biosecurity field. The instructors will emphasize how a mix of theoretical case studies, incidents, accidents, and other experiences which will provide a basis for an ongoing, engaging, and interesting training program. The course consists of a mixture of theoretical lessons and facilitated adult learning using group discussions and presentations giving insight in the psychological background for how training can either be a success or a failure.

Objectives:

- Express an understanding of why we train and training topic drivers
- Summarize training objectives and training design cycle (Analyze, Design, Develop, Implement, and Evaluate [ADDIE])
- Restate different learning styles (reflector, theorist, pragmatist, and activist), Kolb's Cycle (experience, reflect, model, and practice), and Blooms Taxonomy of Cognitive Domains (know, learn, apply, analyze, and evaluate)
- Differentiate between training, teaching, coaching, and facilitating
- Distinguish the pros and cons for different teaching styles and the costs and resources needed for different types of training programs
- Determine the suitability of different training methods for different types of staff/employees depending on skills, education, personality type, and learning preference

Suggested Background: Fundamentals of Biosafety, Principles and Practices of Biosafety
Target Audience: All Safety Professionals, New Biosafety Professionals, Experienced Biosafety Professionals
Audience Level: Basic/Intermediate

8:00 am - 12:00 pm

11. Case Studies in Recombinant DNA and Dual Use Research

Kathryn Harris, PhD, RBP, National Institutes of Health, Bethesda, MD

In this interactive session, participants will have an opportunity to work through a series of case studies describing hypothetical events occurring in the course of recombinant DNA research that might represent significant problems or violations that need to be addressed and corrected by the institution. After discussion of the initial scenario, participants will be led through a process where they will contribute their own facts and ideas to create a dynamic case study experience. A similar process will be used to examine the institutional oversight and management issues posed by life sciences research that is potentially a dual use research of concern.

Objectives:

- Describe institutional responsibilities for ensuring the safe conduct of recombinant DNA research
- Recognize the need for oversight, management, and responsible conduct of dual use life sciences research
- Describe the importance of developing institutional biosafety and biosecurity polices and a robust training program

Suggested Background: Basic knowledge of NIH Guidelines for research involving rDNA
Target Audience: New Biosafety Professionals, Experienced Biosafety Professionals, IBC Chairs, IBC Members, other staff supporting the IBC, Research Oversight and Compliance Officials
Audience Level: Intermediate

8:00 am - 12:00 pm

12. Microbiology and Indoor Air Quality

Jyl Burgener, RBP, CBSP, Grifols, Clayton, NC

The purpose of this course is to acquaint the participant with a basic understanding of the role of microbiology in indoor air quality (IAQ) investigations.

Objectives:

- Restate the differences between Sick Building Syndrome, Building Related Illness, and Crisis Building
- Define the typical medical symptoms associated with Sick Building Syndrome and Building Related Illness
- Identify common causes or origins of IAQ complaints

- List various types of environmental conditions that lead to bacteria or mold amplification
- Review some sampling strategies for documenting the presence or absence of mold in an environment
- Cite concerns and the how to mitigate occupational exposure during mold remediation activities

Suggested Background: Background in microbiology and some experience performing IAQ investigations
Target Audience: All Safety Professionals, New Biosafety Professionals
Audience Level: Intermediate

8:00 am - 12:00 pm

13. Introduction to a Nonhuman Primate Training Program

Belinda Rivera, University of Texas Medical Branch, Galveston, TX

This course will introduce basic information to individuals that are currently working or plan on working with nonhuman primates (NHP) in their institutions. This course can also be used to evaluate an existing NHP training program or assist in developing a new program. Topics will include personal protective equipment (PPE), Herpes B risk assessment, emergency procedures, training of personnel, and documentation of training. Training of personnel should be based on an individual's job requirement which may include direct or indirect contact with NHPs and training documentation requirements needed to fulfill institutional and regulatory agencies. Other topics that will be discussed include NHP behavior, handling of NHPs, common technical procedures performed on NHPs and regulations regarding their caging and enrichment requirements. At the conclusion of the course, case-based scenarios will be used to illustrate key points.

Objectives:

- Evaluate existing NHP training program or be able to implement a new program
- Determine a risk assessment based on a person's required training
- Summarize a Herpes B risk assessment
- Determine proper PPE for personnel working in NHP rooms
- Apply knowledge gained regarding an emergency/exposure response

Suggested Background: None
Target Audience: All Safety Professionals, Laboratory Workers, Animal Caretakers
Audience Level: Basic

8:00 am - 12:00 pm

14. Infectious Substance Shipping Refresher Course

Eric Cook, MPH, CBSP, Sandia National Laboratories, Albuquerque, NM

This course is intended for those who are already experienced dangerous goods shippers. Those who wish to participate in this course must have completed an IATA Dangerous Goods certification course within the past 3 years. Participants will receive an update of changes to U.S. and international regulations that affect shippers of infectious substances. The course will provide a brief review of applicable regulations, shipper's responsibilities and overview of the nine classes; detailed analysis and discussion of infectious substance classification, Category A, Category B, and exempt materials; packaging, marking, and labeling infectious substance shipments including dry ice and liquid nitrogen shipments; and practical exercises regarding the essentials of applicable documentation. This is a refresher course for those need recertification. A certification exam will be given at the conclusion of the course. Participants must score at least 70% in order to be certified.

Objectives:

- Cite relevant changes and review both U.S. and international regulations affecting shippers of infectious substances
- Explain how to properly classify infectious substance shipments (Category A, Category B, exempt, and materials excepted from the regulations)
- Summarize how to properly package, mark, label, and prepare shipments of infectious substances, Category A, Category B, and exempt (including over packs, dry ice, and liquid nitrogen)
- Review how to complete paperwork associated with infectious substance shipping (shipper's declaration, airway bill, etc.)

Suggested Background: Completed IATA certification (or other relevant) course within the past 3 years
Target Audience: All Safety Professionals, Experienced Biosafety Professionals, those needing IATA recertification
Audience Level: Advanced

1:00 - 5:00 pm

15. NIH OBA and Select Agent Incident Reporting: A Practical Guide

Bruce Whitney, PhD, Texas A&M, College Station, TX

This course is designed to assist biological safety officers and administrators/management in the process of reporting incidents under the NIH Guidelines for research involving recombinant DNA molecules (NIH Guidelines) and the select agent regulations. This course will not only review the regulatory requirements and process for reporting, but will offer practical guidance for incident investigation (including the root cause analysis) and writing both immediate and follow-up incident reports. The course will be highly interactive and end with real-world scenario-based exercises. Participants are encouraged to bring their own scenarios for discussion and practice.

Objectives:

- Explain federal reporting requirements and process
- Identify incidents that require reporting and those that do not
- Apply root cause analysis in the incident investigation process
- Write immediate and follow-up incident reports for submission to federal regulators

Suggested Background: None
Target Audience: New Biosafety Professionals, Experienced Biosafety Professionals, Administrators/Management
Audience Level: Basic

1:00 - 5:00 pm

16. Biorisk Management Systems—Developing Your Roadmap to Implementation

Patricia Olinger, RBP, Emory University, Atlanta, GA

This course is an introduction to Biorisk Management Systems. The class will use the elements of CWA 15793:2008 and its guidance document CWA 16363:2012 to provide participants with a better understanding of what is needed to develop their own road map to biorisk management program development and implementation.

Objectives:

- Communicate the elements of a biorisk management systems
- Describe the elements of a management system and how they are used to develop road map to implementation
- Identify measures and metrics for program effectiveness

Suggested Background: None
Target Audience: Experienced Biosafety Professionals, All Safety Professionals
Audience Level: Intermediate

1:00 - 5:00 pm

17. Aerobiology in Infectious Disease Research: Fundamental and Applied Concepts

Chad Roy, PhD, Tulane University, New Orleans, LA

This course is intended to introduce the fundamental concepts of aerobiology and applications in infectious disease research. The major scientific tools and laboratory procedures associated with this activity will be presented didactically. Discussions will include the integration of animal exposure in the context of biomedical research and the implications for working safely in high-containment environments. Introduction of these specialized techniques and the use of major engineering controls used in this type of research (Class III biological safety cabinet) in conjunction with many of the common inhalation configurations used in this type of research. The overarching goal of this course is to leave the participants with an appreciation and general working knowledge of the major components and associated laboratory technique in facilities engaged in infectious disease research which also house the capability to perform studies that incorporate aerobiology.

Objectives:

- Identify the major scientific tools and engineering controls used in this type of research
- Recognize the nature of laboratory-generated aerosols containing highly infectious agents and their consequences
- Restate requirements for operational safety and health in work environments that include this
- Recognize of the health and safety implications of the integration of live animal experimental exposures with infectious aerosols under high-containment

Suggested Background: Fundamentals of Biosafety, Biosafety Level 3 Operations
Target Audience: New Biosafety Professionals, Experienced Biosafety Professionals, Laboratory Workers
Audience Level: Intermediate

1:00 - 5:00 pm

18. Biological Toxins and the Biosafety Professional

Andrew Maksymowych, PhD, RBP, University of Pennsylvania, Philadelphia, PA
Susan Souder, CBSP, University of Pennsylvania, Philadelphia, PA

Toxins of biological origin are routinely used in many research laboratories. Providing appropriate guidance regarding safety practices to a researcher working with a biological toxin may not feel like a straightforward matter. A number of variables must be evaluated in order to provide appropriate guidance. Answers need to be articulated regarding what kind of biological toxin is being used, the potential routes of exposure, and a risk assessment specific to the work being pursued. (Topics covered include identifying select agents, safety measures for working with animals, shipping guidelines and communication of safety handling criteria.) Resources for developing an adequate risk assessment will be discussed. This interactive course will provide an opportunity to integrate basic knowledge and practical skills for recommending safe work practices when using biological toxins. Using sample scenarios and hands-on exercises participants will evaluate and apply the information presented by working together in groups conducting risk assessments, evaluating case studies, and sharing their results. This activity will provide participants the basic tools to communicate safe work practices to researchers.

Objectives:

- Describe the general properties of biological toxins
- Outline proper resources and guidance to enable safe work with biological toxins
- Perform a risk assessment for working with a biological toxin
- Identify and address common misconceptions regarding work with biological toxins
- Summarize case studies regarding working with a biological toxin

Suggested Background: Fundamentals of Biosafety, Principles and Practices of Biosafety
Target Audience: All Safety Professionals, New Biosafety Professionals, Experienced Biosafety Professionals
Audience Level: Intermediate

Sunday, October 21, 2012

8:00 am - 5:00 pm

19. Risk Assessment and Containment for Plant-based Recombinant DNA Research

M. Malendia Maccree, University of California—Davis, Davis, CA

This course will provide an overview of plant-based recombinant DNA research conducted with a focus on biological safety and containment. The course will include basic knowledge of plant molecular biology, plant-microbe interactions, and plant pathology which is critical to successful risk assessments for plant-based experiments involving recombinant DNA. Additional considerations such as greenhouse operations, seasonal cycles, environmental release of recombinant organisms, and the perspective of plant researchers will be discussed. Applicable regulations and guidelines will be reviewed. Examples and applications of common controls and best practices will be described and examined. Participants will be asked to synthesize basic botany and molecular biology concepts in order to apply principles of risk assessment and containment to plant-based research. Interactive exercises will provide case-study examples for participants to identify stakeholders, perform a risk assessment, cite applicable jurisdictions and regulatory requirements, and suggest appropriate controls and best practices to address identified risks.

Objectives:

- Identify and understand common types of plant-based experiments which involve recombinant DNA
- Apply biological risk assessment methodology and identify appropriate containment levels for plant-based experiments
- Identify regulations, guidelines, and jurisdictions which pertain to plant-based research with recombinant DNA
- Recognize and respond to unique biological safety programmatic challenges presented by BSL-1 and plant-based microbiological research

Suggested Background: Risk Assessment, Micro/Molecular Biology 101, Principles and Practices of Biosafety
Target Audience: New Biosafety Professionals, Experienced Biosafety Professionals, Biosafety Professionals Working with Plant Pathologists (BSL-1, BL-1-3P), and Plant Scientists (BSL-1)
Audience Level: Intermediate

8:00 am - 5:00 pm

20. The Role of Threat Assessment in Biosecurity Programs

Ben Perman, PhD, RBP, Booz Allen Hamilton, Inc., Washington, DC
Jason Griffeth, Booz Allen Hamilton, Inc., Herndon, VA
Lindsay Odell, PhD, Booz Allen Hamilton, Inc., McLean, VA
Nanda Gudderra, PhD, Northern Arizona University, Flagstaff, AZ
Patricia Delarosa, PhD, RBP, CBSP, Booz Allen Hamilton, Inc., McLean, VA

This course will train administrators, management, and researchers the basic principles of threat assessment and introduce participants to the role of threat assessment in biosecurity programs. The course will provide participants with a basic tool-kit that will allow implementation of successful insider threat mitigation strategies using threat assessment at their home institutions and to convey concepts in threat assessment to their colleagues. This course will follow established criminal psychology techniques in the personal protection field that are used to identify, assess, and manage dangerous threats. Participants will be presented with relevant case studies in order to learn about basic threat indicators and threatening behaviors. Through an analysis of relevant case studies, participants will learn how to recognize specific personal security vulnerabilities and how to link these vulnerabilities to threats. The course will focus on the requirements of a biosecurity program and the role of threat assessment in the management of effective personal security and personal suitability or reliability components of biosecurity programs. Regulatory issues relevant to threat assessment and the implementation of personnel management programs will also be discussed. Theoretical concepts will be put into practice in a tabletop exercise devised around a realistic laboratory security problem that draws on the material presented in the lecture and case studies.

Objectives:

- Describe the basic principles of threat assessment in a biosecurity program and how threat assessment can be implemented in a successful insider threat mitigation program
- Recognize specific personal security vulnerabilities and how to link these vulnerabilities to threats
- Discuss the purpose and requirements of basic suitability or reliability and threat assessment programs and their roles in laboratory biosecurity management
- Identify resources and the legal and regulatory controls relevant to threat assessment and the implementation of a laboratory biosecurity program

Suggested Background: None
Target Audience: All Safety Professionals, Laboratory Workers, Security Professionals
Audience Level: Basic

8:00 am - 5:00 pm

21. Designing a Resilient Civilian Biosurety Program for Biosafety Level 3 Laboratories

Jessica McCormick, PhD, RBP, University of Medicine and Dentistry of New Jersey, Newark, NJ
Marta Figueroa, University of Medicine and Dentistry of New Jersey, Newark, NJ
Brendan McCluskey, MPA, JD, University of Medicine and Dentistry of New Jersey, Newark, NJ

A strong biosurety program encompassing physical security, biosafety, agent accountability, and personnel reliability is key to running a successful, safe, and secure BSL-3 facility. Laboratory support and biosafety staff must be knowledgeable on the implementation of security measures; prepared to deal with exposure incidents, natural disasters, and other incidents that may affect workers in and outside of the BSL-3 laboratory; and have a mechanism to account for agent stock, equipment, and other materials. Ensuring BSL-3 laboratory staff is capable of dealing with the pressures of working in containment space and maintaining a level of trust is particularly problematic. The biosurety program for a BSL-3 laboratory must be designed to prevent events, reduce the impact should an incident occur, address any vulnerabilities present, and prepare staff to handle incidents that may occur in the facility.

Objectives:

- Identify strategies, policies, plans, training programs, and exercises that will prepare staff members for incidents affecting the BSL-3 laboratory
- Develop a program and policies for risk assessment and continued verification, including security, biological protocols, and personnel
- Define a training program to ensure staff members demonstrate competence to work in and around a BSL-3 laboratory
- Recognize policies designed to prevent laboratory incidents at BSL-3 laboratories

Suggested Background: None
Target Audience: New Biosafety Professionals, Laboratory Workers
Audience Level: Basic

8:00 am - 12:00 pm

22. The Physics Behind Biocontainment—Part I

Juan Osorio, National Institutes of Health, Bethesda, MD
Keith Ashe, National Institutes of Health, Bethesda, MD
Theodore J. Traum, PE, National Institutes of Health, Bethesda, MD
Diego Osorio, National Biosafety & Biocontainment Training Program, Bethesda, MD

Many principles in physics can be applied to the proper operation of a biocontainment laboratory. Concepts such as directional airflow, pressure, temperature, and humidity are needed to make a biocontainment facility run effectively and efficiently. Some biosafety professionals may not be aware that these concepts can impact their work and research. The objective of this course is to explain these physics concepts using basic real-life examples and how they apply to biocontainment laboratories. Throughout the course, examples of basic physics concepts will be demonstrated to add a visual dimension that formulas and definitions cannot accomplish. Physics visual aids will be used to demonstrate actual engineering principles relating to biocontainment laboratories. Building upon the physics concept, static pressure as it relates to an exhaust system and fan selection will be explained. A hands-on activity will be conducted following the explanation of each physics concept. This course will not be driven by formulas but will integrate examples that show cause and effect in real-life scenarios. Building on this information, there will be a step-by-step presentation on how these examples are relevant to planning a laboratory, validation, certification, maintenance, and operations.

Objectives:

- Apply physics concepts and formulas to control variables that impact daily work and eliminate disruption
- Interpret and understand data that is used for measuring pressure, temperature, humidity, and airflow
- Recognize how a building's system is affected by variables such as barometric pressure and temperature

Suggested Background: None
Target Audience: All Safety Professionals, Laboratory Workers, New Biosafety Professionals
Audience Level: Basic

8:00 am - 12:00 pm

23. High Speed Cell Sorter Selection, Biosafety, and Aerosol Containment

Geoffrey Lyon, MPH, Yale University, New Haven, CT

High speed cell sorting is a very common research tool utilized by universities, biotechnology companies, and hospitals. High speed cell sorters allow users to separate tens of millions of cells per hour with purities of > 99%. This makes cell sorting one of the most effective method of separating cell populations from a heterogeneous mixture. High speed cell sorters are also capable of generating massive aerosols in the event of a clog or deflection. This course will help biosafety professionals understand the potential risk associated with cell sorters. We will discuss safety features of various machines and highlight aspects of each that should be considered when purchasing. High speed cell sorting is also utilized by people who want to sort cells that are infected with various agents and pathogens. This course will focus on the safety considerations that are required when creating a BSL-3 cell sorting facility. It will look at the creation of SOPs, facility requirements, and risk assessment process for sorting BSL-3 materials. Different methods used in assessing the containment of aerosols for cell sorters will also be examined. The overall goal of this class is to provide biosafety professionals with a background to help them make decisions on safety and containment for high speed cell sorters, particularly in a BSL-3 setting.

Objectives:

- Provide a brief background on the differences between flow cytometry and high speed cell sorting
- Determine the level of containment needed for high speed cell sorters and guidelines to use in evaluating cell sorters for RG3 cell sorting
- Identify the variety of different methods used in evaluating and testing the aerosol containment of high speed cell sorters
- Explain the topics needed to develop emergency response to catastrophic failures of high speed cell sorters
- Identify the topics needed to develop SOPs and risk assessments for cell sorters

Suggested Background: Fundamentals of Biosafety, Risk Assessment, Biosafety Level 3 Operations, Principles and Practices of Biosafety
Target Audience: All Safety Professionals, Laboratory Workers, Experienced Biosafety Professionals
Audience Level: Basic

8:00 am - 12:00 pm

24. Fundamentals of Microbiology and Infectious Disease

James Klenner, MS, RBP, CBSP, Indiana University—Purdue University Indianapolis, Indianapolis, IN

This course is intended for those professionals that participate in protocol review, facilities planning, and any other risk assessment activities but are unsure as to the actual nature of the disease risks of microbiological agents. Biological safety and risk assessment will ***not*** be covered in this course. The proposed topics will cover infectious agents, virulence factors, pathogenicities, host-microbe interactions, susceptibility, modes of transmission, and the changes seen in the microbial world. If you don't know the difference between a $TCID_{50}$, PFU, or ID_{50}; or why HBV is stable in dried blood and HIV isn't; or why influenza is an inhalation hazard; or why public health officials advocate flu shots each year, then this class is for you.

Objectives:

- Define different microorganisms and their pathogenicity
- Restate the various modes of transmission of microbial pathogens
- Correlate the host response to microbial infections
- Develop a basis for various environmental survival trends

Suggested Background: None
Target Audience: New Biosafety Professionals, All Safety Professionals
Audience Level: Basic

1:00 - 5:00 pm

25. The Physics Behind Biocontainment—Part II

Juan Osorio, National Institutes of Health, Bethesda, MD
Keith Ashe, National Institutes of Health, Bethesda, MD
Theodore J. Traum, PE, National Institutes of Health, Bethesda, MD
Diego Osorio, National Biosafety & Biocontainment Training Program, Bethesda, MD

The second part of this course is built upon in physics principles covered in "The Physics Behind Biocontainment—Part I." The concepts learned in the first part of the course will be applied to scenarios that take place in a BSL-3 laboratory. Concepts such as how to achieve directional airflow, calculating pressure differentials, and understanding how the laboratory HVAC system works will be discussed. Real-life examples of physics concepts will be applied to biocontainment laboratories. These physics concepts will be presented through hands-on exercises that easily explain formulas and definitions that can be difficult to understand. Physics visual aids will be used to demonstrate actual engineering principles relating to biocontainment laboratories. A hands-on activity will be conducted following the explanation of each physics concept. This course will not be driven by formulas but will integrate examples that show cause and effect in biocontainment laboratories. Realistic scenarios will also be presented that are relevant to planning a laboratory, validation, certification, maintenance, and operations.

Objectives:

- Calculate, interpret, and understand pressure differentials for biocontainment laboratories
- Recognize how a biocontainment laboratory's HVAC system works

Suggested Background: Physics Behind Biocontainment—Part I or Physics Behind Biocontainment (ABSA 2011)
Target Audience: All Safety Professionals, Laboratory Workers, New Biosafety Professionals
Audience Level: Intermediate

1:00 - 5:00 pm

26. Preparing for, Conducting, and Responding to Regulatory Agency Inspections/Audits

Barbara Fox Nellis, SM(NRCM) RBP, CBSP, Barb Nellis Consulting, Sarasota, FL

This course will prepare the biosafety and other safety professionals, the entity, and laboratories for onsite regulatory inspections. Information will be provided to help participants identify what the different regulators are looking for, what they want in advance of their visit, and what to do with a surprise inspection. This course will also address how onsite audits vary and what is similar between CDC, USDA/APHIS, DHS, DOD, DOT, FDA, AAALAC, FAA, NIH, DEA, OSHA, NRC, EPA, and other regulatory agencies; steps to take in preparing the facility, documentation and personnel as well as the management team, for the onsite audit. Participants will learn why OSHA regulation compliance and training records are important; what you can and should control, and tips for training the visiting auditors if they expect to enter hazardous chemical, biological, or radiation areas. Other topics covered include worker interviews and stumbling blocks, training records and verification of training, individual training records for various work and containment environments, what should the auditors present and what should the facility present; how to word the follow-up report, presenting timelines for completion, and thoughtful challenges to the auditor's findings. Exercises will be completed in a small group breakout, checklists used by the various regulatory agencies will be shared and internal checklists for the facility created from templates to cover various types of facilities.

Objectives:
- Identify what agencies can and will inspect your entity
- Define the proper documentation and training necessary for an audit
- Identify the follow-up that is required and the level of detail that is necessary to respond to an audit

Suggested Background: Fundamentals of Biosafety
Target Audience: All Safety Professionals, Experienced Biosafety Professionals, Administrators of Containment Facilities
Audience Level: Basic

1:00 - 5:00 pm
27. Molecular Biology 101
James Klenner, MS, RBP, CBSP, Indiana University—Purdue University Indianapolis, Indianapolis, IN
This course is intended for those professionals that participate in protocol review, facilities planning, and other risk assessment activities but lack a basic understanding of molecular biology and techniques. Following this course, attendees will be able to do more than regurgitate facts and use the new understanding of the principles of molecular biology in various situations at their institution. This course will cover topics such as the chemistry of nucleic acids, DNA replication, RNA transcription, and protein translation, the Central Dogma of Biology, DNA cloning, transfection of prokaryotic and eukaryotic cells, restriction enzymes, and recombinant DNA lab methodologies (including PCR, DNA fingerprinting, sequencing, and detection protocols). While this course will not turn you into a molecular biologist, it will give you enough background information to understand the nature and manipulation of genetic material and hopefully unveil the mystery of deoxyribonucleic acid.
Objectives:
- Explain the differences and chemistry of nucleic acids
- Define general molecular biology techniques
- Demonstrate an understanding of the principles of molecular biology used to develop recombinant DNA technology and to show how these technologies are used to study biological phenomena

Suggested Background: None
Target Audience: New Biosafety Professionals, All Safety Professionals
Audience Level: Basic

Conference Agenda

Monday, October 22, 2012

7:00 am - 5:00 pm	Registration
7:00 - 8:00 am	Continental Breakfast
7:00 am - 4:00 pm	Vendor Exhibits
8:00 - 8:05 am	Welcome Master of Ceremonies
8:05 - 8:10 am	Local Arrangements Committee Welcome Jose Vazquez, Jr.
8:10 - 8:15 am	Scientific Program Committee Welcome Dawn P. Wooley, PhD, SM(NRCM), RBP, CBSP
8:15 - 8:30 am	ABSA President's Address LouAnn Burnett, MS, CBSP, Sandia National Laboratories, Albuquerque, NM

Session I	**Wedum Lecture Award Presentation**
8:30 - 9:30 am	Introduction: LouAnn Burnett, MS, CBSP, Sandia National Laboratories, Albuquerque, NM Synthesis of a Recombinant Bat SARS-like Coronavirus Mark R. Denison, MD, Vanderbilt University Medical Center, Nashville, TN
Session II	**Town Hall Meeting on the New Select Agent Regulations** Moderator: TBD
9:30 - 10:00 am	Summary of the 2012 Changes to the HHS Select Agent Regulations 42 CFR 73 Robbin Weyant, PhD, Centers for Disease Control and Prevention, Atlanta, GA
10:00 - 10:30 am	Q&A
10:30 - 11:00 am	Exhibits, Posters, and Coffee Break
Session III	**Disinfection and Biowaste Management** Moderator: TBD
11:00 - 11:20 am	Green Gas, Dry Mists, and Dense Vapors: An Overview of Independent Fumigant Testing at The UK Health and Safety Laboratory Alan Beswick, The Health and Safety Laboratory, Buxton, Derbyshire, UK
11:20 - 11:40 am	Validation Study for the Use of Hydrogen Peroxide Vapor as a Decontaminant for Biosafety Cabinets in Accordance with the Requirements of NSF/ANSI 49 Nick Flynn, B&V Testing, Inc., Waltham, MA
11:40 am - 12:00 pm	Approaches to Laboratory Waste Management in Developing Countries Daniel Kimani, MD, Centers for Disease Control and Prevention, Atlanta, GA David Ausdemore, PE, MS, Centers for Disease Control and Prevention, Atlanta, GA
12:00 - 1:30 pm	Lunch, Exhibits, and Posters
Session IV	**Poster Session**
12:30 - 1:30 pm	Presenters must be available during the session.
Session V	**Invited Paper**
1:30 - 2:30 pm	Introduction: Janet Peterson, RBP, CBSP, University of Maryland, College Park, MD Avian Influenza Transmissibility Research Daniel Perez, PhD, University of Maryland, College Park, MD
2:30 - 3:00 pm	Exhibits, Posters, and Coffee Break
Session VI	**Biosecurity and Regulatory Issues** Moderator: TBD
3:00 - 3:20 pm	Electronic Prioritization of the NIH Intramural Database (NIDB) to Facilitate Efficient "Dual Use Research of Concern" (DURC) Review at the National Institutes of Health Antony Schwartz, PhD, National Institutes of Health, Bethesda, MD
3:20 - 3:40 pm	Liability Issues and Principal Investigators Casey Skvorc, National Institutes of Health, Washington, DC
3:40 - 4:00 pm	The Intersection of Laboratory Safety and Ethics Theodore Myatt, RBP, Brigham and Women's Hospital, Boston, MA
4:00 - 4:20 pm	Small, Medium, Large, Extra Large: Sustainable, Regional Biosafety and Biosecurity Solutions Jennifer Gaudioso, PhD, Sandia National Laboratories, Albuquerque, NM
4:20 - 4:40 pm	The Development of the Canadian Biosafety Standards Guidelines (CBSG) Corrine Harris, Public Health Agency of Canada, Ottawa, Ontario, Canada
4:40 - 5:00 pm	Application of Threat Assessment Approaches in Reliability and Suitability in Biosecurity Ben Perman, RBP, Booz Allen Hamilton, Washington, DC
5:00 pm - Close	**Members' Business Meeting** (*Door prizes will be awarded—must be present to win.*)

Tuesday, October 23, 2012

7:00 am - 5:00 pm	Registration
7:00 - 8:00 am	Continental Breakfast
7:00 am - 4:00 pm	Vendor Exhibits
8:00 - 8:05 am	Welcome Master of Ceremonies: TBD
Session VII	**Griffin Lecture Award Presentation**
8:05 - 9:05 am	Introduction: Caryl Griffin, MSN, MDiv, Elizabeth R. Griffin Foundation, Kingsport, TN Title: TBD Speaker: TBD
Session VIII	**Animal Biosafety** Moderator: TBD
9:05 - 9:25 am	Reactivation of Herpes B Virus in Seropositive Nonhuman Primates: Case Study in Risk Assessment and Institutional Response Molly Stitt-Fischer, PhD, University of Pittsburgh, Pittsburgh, PA
9:25 - 9:45 am	Risk-specific Garbing Procedures for Nonhuman Primate Facilities Kathryn Board, University of Pittsburgh, Pittsburgh, PA
9:45 - 10:05 am	Case Study for Animal Care Post Approval Monitoring Robert Hashimoto, SM(NRCM), RBP, CBSP, University of California—Berkeley, Berkeley, CA
10:05 - 10:25 am	Biosafety Training Tailored to Field Veterinarians in the Democratic Republic of Georgia Tea Glonti, PhD, Battelle Memorial Institute, Tbilisi, Republic of Georgia
10:25 - 10:55 am	Exhibits, Posters, and Coffee Break
Session IX	**Training** Moderator: TBD
10:55 - 11:15 am	Annual Safety Training: Keeping it Interesting Amy Vogler, PhD, RBP, Northern Arizona University, Flagstaff, AZ
11:15 - 11:35 am	Generation of Aerosols through Standard Laboratory Procedures and the Analysis of Training and Staff Experience Anjeet Jhutty, Health Protection Agency, Salisbury, UK
11:35 - 11:55 am	Sustaining International Biorisk Management Best Practices Following a Comprehensive Biosafety and Biosecurity Training Session Lora Grainger, PhD, Sandia National Laboratories, Albuquerque, NM
11:55 am - 12:15 pm	Training Program: A 6-Year Story Anne-Sophie Brocard, PhD, RBP, CBSP, University of Texas Medical Branch, Galveston, TX
12:15 - 12:35 pm	Evolution of Biocontainment Training for Personnel Rebecca Caruso, Harvard Medical School, Boston, MA
12:35 - 2:00 pm	Lunch, Exhibits, and Posters
Session X	**Poster Session**
1:00 - 2:00 pm	Presenters must be available during the session.
Session XI	**Eagleson Lecture Award Presentation**
2:00 - 3:00 pm	Introduction: TBD Directed Evolution of Microorganisms David Schaffer, PhD, University of California—Berkeley, Berkeley, CA
3:00 - 3:30 pm	Exhibits, Posters, and Coffee Break

Session XII		
Start Time	**Basic Biosafety** Moderator: TBD	**Advanced Biosafety** Moderator: TBD
3:30 pm	NIH Guidelines Kathryn Harris, PhD, RBP, National Institutes of Health, Bethesda, MD	Emerging Diseases Representative from the Centers for Disease Control and Prevention, Atlanta, GA
4:00 pm	Responsibilities of the Biosafety Officer and Institution Debra Hunt, PhD, RBP, CBSP, Duke University, Durham, NC	Emerging Legislation: Importation of Infectious Biological Agents, Infectious Substances, and Vectors Vondguraus McClee, Centers for Disease Control and Prevention, Atlanta, GA
4:20 pm	Risk Assessment Emmett Barkley, PhD, Proven Practices, LLC, Bethesda, MD	Dual Use Murray Cohen, PhD, MPH, Frontline Healthcare Workers Safety Foundation, Atlanta, GA
4:40 pm	Q&A	Q&A

6:30 - 11:00 pm **Banquet—Sea World**

Wednesday, October 24, 2012

7:00 am - 5:00 pm Registration

7:00 - 8:00 am Continental Breakfast

8:00 - 8:05 am Welcome
Master of Ceremonies: TBD

Session XIII		
Start Time	**Facilities and Equipment** Moderator: TBD	**Program Management** Moderator: TBD
8:05 am	A BSL-3 Pilot Plan for Food Processing: A Case Study Margaret Juergensmeyer, PhD, RBP, Institute for Food Safety and Health, Bedford Park, IL	Initiation of ABSL-3 Influenza Work Based on the Biorisk Management System (CWA 15793:2008) Kalpana Rengarajan, PhD, RBP, Emory University, Atlanta, GA
8:25 am	Fluorescein Analysis of an Aerosol Exposure Chamber Thomas Cremer, PhD, National Biosafety and Biocontainment Training Program, Bethesda, MD	Logistic and Technical Challenges in Designing and Constructing a High-containment Facility in the Middle East Les Gartner, AIA LEED GA, Smith Carter Architects and Engineers, Atlanta, GA
8:45 am	Trends and Challenges of Large-scale Vaccine Production in High-containment Environments Karin Wassard, NNE Pharmaplan A/S, Gentofte, Denmark	The IFBA Certification Program: Ensuring Quality Biorisk Management Through Certification of Professionals Maureen Ellis, MS, RBP, International Federation of Biosafety Associations, Ottawa, Ontario, Canada
9:05 am	A Risk-based Approach to Biocontainment Facilities: Practical, Sustainable, and Cost-effective Solutions Paul Langevin, PEng, Merrick and Company, Ottawa, Ontario, Canada	Integrating Safety in Science—How to Get Scientists to Buy-in Viji Vijayan, MD, RBP, Duke—NUS Graduate Medical School, Singapore
9:25 am	Right Sizing Containment Facilities Vibeke Halkjaer-Knudsen, PhD, Sandia National Laboratories, Albuquerque, NM	Evaluating and Improving Biosafety in Uganda and Rwanda Jonathan Y. Richmond, PhD, RBP, Jonathan Richmond and Associates, Southport, NC

9:45 - 10:15 am Coffee Break

Session XIV		
Start Time	**Risk Management** Moderator: TBD	**Health & Safety/Emergency Response** Moderator: TBD
10:15 am	NBACC Biosafety and Biosecurity Risk Assessments: Process and Product Sherry Bohn, PhD, SM(NRCM), National Biodefense Analysis Countermeasures Center, Frederick, MD	Liquid Nitrogen: Learning Lessons the Hard Way Anton de Paiva, PhD, Imperial College London, London, UK
10:35 am	Introduction of Live Virus to U.S. Vaccine Manufacturing Janice Flesher, SM(NRCM), CBSP, GlaxoSmithKline Biologicals, Marietta, PA	Description of an Accident Due to Increasing Pressure in an Air-tight Room—Lessons Learned and Implementation of Technical Safety Measures Daniel Kuemin, PhD, Spiez Laboratory, Spiez, Switzerland
10:55 am	Re-aerosolization of *Bacillus atropheaus* from Flooring Materials Susan Macken, PhD, Health Protection Agency, Salisbury, UK	Reducing Bloodborne Pathogen Exposures Among Clinical Participants Scott Finkernagel, CBSP, Weill Cornell Medical College, New York, NY
11:15 am	Survey of Biorisk Management in Clinical Laboratories in Karachi, Pakistan Shamsul Arfin Qasmi, RBP, KESC Medical Center, Karachi, Pakistan	The Dark Side of Biosafety: Trauma Scene Clean-up Patricia Cox, PhD, RBP, Mississippi State University, Mississippi State, MS

11:35 am - 1:30 pm **Honor Awards and Special Recognition Luncheon**
Presenter: LouAnn Burnett, MS, CBSP, Sandia National Laboratories, Albuquerque, NM
Arnold G. Wedum Distinguished Achievement Award
Everett J. Hanel, Jr. Award Presentation
John H. Richardson Special Recognition Award
International and National Poster Awards
Recognition of Certified Biosafety Professionals and Registered Biosafety Professionals
Presenters: Betty Kupskay, MS, RBP, University of Minnesota, Minneapolis, MN
Krista Murray, RBP, CBSP, University of Delaware, Newark, DE

Session XV **Knudsen Award & Lecture**
1:30 - 2:30 pm Moderator: Judy LaDuc, RBP, University of Massachusetts, Amherst, MA
Title: TBD
Speaker: TBD

2:30 - 3:00 pm Coffee Break

Session XVI **Mock IBC**
Moderator: TBD
3:00 - 3:30 pm Protocol 1
3:30 - 4:00 pm Protocol 2
4:00 - 4:30 pm Protocol 3

4:30 pm **Close of Conference**
Master of Ceremonies

Registration Form
55th Annual Biological Safety Conference
October 19-24, 2012

❑ ABSA Member ID Number: _____ ❑ Nonmember

Last Name: _____ First Name: _____

Organization: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone: _____ E-mail: _____

Emergency Contact: _____

Phone: _____

Conference Fees	**Pre Sept. 28**	**Post Sept. 28**	**Amount**
ABSA Member	$685	$735	$_____
Nonmember	$860	$910	$_____
Member of ABSA Affiliate Discount Code: _____	$775	$825	$_____
One-day (day _____)	$230	$255	$_____
Emeritus Member	$310	$350	$_____
2012 Individual ABSA Dues	$210	$210	$_____

Registration includes: continental breakfasts, breaks, lunches, Opening Reception, and banquet. One-day registration does not include the banquet.

❑ Dietary Restrictions: _____

Additional Tickets

Additional lunch ($50 each) $_____
Banquet ($140 each) $_____
Total from course(s) $_____
Total amount enclosed or charged: $_____

Registration is not complete without payment or credit card information. Purchase Orders are not accepted. Check must be made payable to "ABSA" and bank drafted in U.S. dollars or it will be returned.

❑ Visa ❑ MasterCard ❑ American Express ❑ Check enclosed

Card #: _____ Exp. Date: _____

Signature: _____

Course space is limited. No course substitutions or changes prior to conference. ***Please visit our web site at www.absaconference.org for course availability and online registration***. Mail to ABSA, 1200 Allanson Road, Mundelein, IL 60060-3808 or fax to 847-566-4580. Participants requesting Affiliate discount pricing, please fax your completed form to the ABSA Office at 847-566-4580.

Cancellation Policy: Cancellations received before September 17, 2012—90% refund; cancellations received between September 17-24, 2012—50% refund. Cancellations received after September 24—no refund.

Preconference Courses

Friday, October 19, 2012	Member	Nonmember	Amount
1. Infectious Substance Shipping Certification	$500	$550	$_____
2. Fundamentals of Biosafety	$500	$550	$_____
3. Introduction to Biological Risk Assessment	$500	$550	$_____
4. Biosafety Management Techniques	$500	$550	$_____
5. Fundamentals of the Class III Biosafety Cabinet	$500	$550	$_____
6. Physical Security for Bioscience Laboratories	$295	$345	$_____
Saturday, October 20, 2012			
7. Concepts of Virology	$500	$550	$_____
8. BSL-3 Operations	$500	$550	$_____
9. Engineering for the Biosafety Professional	$500	$550	$_____
10. Designing a Training Program	$500	$550	$_____
11. Case Studies in rDNA and Dual Use Research	$295	$345	$_____
12. Micro and Indoor Air Quality	$295	$345	$_____
13. Intro to Nonhuman Primate Training	$295	$345	$_____
14. Infectious Substance Shipping Refresher	$295	$345	$_____
15. NIH OBA and Select Agent Reporting	$295	$345	$_____
16. Biorisk Management	$295	$345	$_____
17. Aerobiology in Infectious Disease Research	$295	$345	$_____
18. Biological Toxins and the Biosafety Professional	$295	$345	$_____
Sunday, October 21, 2012			
19. Risk Assessment and Containment	$500	$550	$_____
20. Roles of Threat Assessment	$500	$550	$_____
21. Designing a Resilient Civilian Biosurety Program for BSL-3 Labs	$500	$550	$_____
22. Physics Behind Biocontainment—Pt. I	$295	$345	$_____
23. High Speed Cell Sorter	$295	$345	$_____
24. Fundamentals of Microbiology	$295	$345	$_____
25. Physics Behind Biocontainment—Pt. II	$295	$345	$_____
26. Regulatory Agency Inspections	$295	$345	$_____
27. Molecular Biology 101	$295	$345	$_____

Registration for two 4-hour courses on the same day will include lunch.

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