



ABSA INTERNATIONAL

59th Annual Biological Safety Conference

Gaylord Texan • Grapevine, Texas
September 30 - October 5, 2016
www.absaconference.org



Preliminary Program

ABSA International

ABSA International was founded in 1984 to promote biosafety as a scientific discipline and serve the growing needs of biosafety professionals throughout the world. The Association's goals are to establish the global standard for biological safety, to provide a professional association that represents the interests and needs of practitioners of biological safety, and to provide a forum for the continued and timely exchange of biosafety information. ABSA International accomplishes these goals through providing members and stakeholders expertise and resources through publications in the peer-reviewed journal *Applied Biosafety*, the ABSA International website, sponsoring an annual Biological Safety Conference, training programs to inform members of regulatory initiatives, hazard recognition and management issues, risk communications, current biosafety publications, meetings and seminars, e-mail updates, training opportunities, and employment opportunities. Additionally, ABSA International members receive "Members Only" web privileges where they have access to past issues of *Applied Biosafety*, and members can participate in a biosafety mentoring program.

What is Biosafety?

The concept of biological safety (or biosafety) has paralleled the development of the science of microbiology and its extension into new and related areas including tissue culture, recombinant DNA, animal studies, molecular biology, synthetic biology, and biotechnology. The knowledge and skill gained by microbiologists necessary to isolate, manipulate, and propagate pathogenic microorganisms required parallel development of containment principles, facility design, and practices and procedures to prevent occupational infections in the workplace or release of the organisms to the environment.

What is a Biosafety Professional?

A biosafety professional develops and participates in programs to promote safe microbiological practices, procedures, and proper use of containment equipment and facilities; stimulates responsible activities among workers; and provides advice on laboratory design.

Core Purpose

ABSA International is dedicated to promoting and expanding biological safety experience.

Core Organizational Values

Leading the profession
Collaboration and community
Promote biosafety as a scientific discipline
Absolute integrity
High standards of excellence



www.absaconference.org

59th Annual Biological Safety Conference

Special Event

Howdy y'all and welcome to Texas. ABSA International and the Local Arrangements Committee have planned an exciting evening for you as we enjoy good Texas BBQ with all the fixin's, watch the sun set over Lake Grapevine, and dance throughout the night to local entertainment. We will host this Texas shindig at the Glass Cactus Night Club located within walking distance from the Gaylord Texan. The Glass Cactus has an extensive collection of local and specialty brews and a range of seating from balcony areas to an outside deck overlooking Lake Grapevine. Boots and belt buckles? If you got 'em, bring 'em. Even if you ain't got 'em, we'll still teach you how to two-step across the dance floor Texas style.

Award Presentations

Monday, 8:30 am—Arnold G. Wedum Memorial Lecture Award

Tuesday, 8:05 am—Griffin Lecture Award

Tuesday, 11:00 am—Eagleson Lecture Award

Wednesday, 11:35 am—Arnold G. Wedum Distinguished Achievement Award

Wednesday, 11:35 am—Everett J. Hanel, Jr. Presidential Award

Wednesday, 11:35 am—John H. Richardson Special Recognition Award

Wednesday, 11:35 am—International and National Poster Awards

Wednesday, 11:35 am—Hashimoto Award for Service and Honor

Wednesday, 11:35 am—Recognition of Certified Biosafety Professionals and Registered Biosafety Professionals

Wednesday, 1:30 pm—Robert I. Gross Student Award

Wednesday, 2:00 pm—Richard Knudsen 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 in the Exhibit Hall.

Hotel Information

Gaylord Texan

1501 Gaylord Trail

Grapevine, TX 76051

Phone: 817-778-1000

Confirmed room rate: \$209.00

Exhibit Hall

The Exhibit Hall will be open on Sunday 6:30 - 8:00 pm for the Opening Reception. It will also be open on Monday and Tuesday for continental breakfasts, lunches, and breaks.

Once Again in 2016

ABSA International will be offering "Exhibit Only" passes for those not attending the Scientific Program, but would like to preview the latest in biosafety and biosecurity products and services in the Exhibit Hall. For more information, please contact the ABSA International office at info@absa.org.



ABSA International has been approved as a provider of continuing education programs in clinical laboratory science by the American Society for Clinical Laboratory Sciences (ASCLS), Professional Acknowledgment for Continuing Education (P.A.C.E.®) program.

For each preconference course, contact hours will be based on 60 minutes of instructional time for each P.A.C.E.® contact hour. The maximum number of P.A.C.E.® contact hours to be credited for half-day courses is 3.50 contact hours and for full-day courses is 7.50 contact hours.

Preconference Courses

Visit www.absaconference.org for course availability.

Friday, September 30, 2016

8:00 am - 5:00 pm

1. Laboratory Design Principles and Practices

Jeffrey Owens, MPH, CBSP, SM(NRCM), CSP, HDR Incorporated, Atlanta, GA

Bill Arndt, PhD, Sandia National Labs, Albuquerque, NM

Mark Fitzgerald, HDR Incorporated, Los Angeles, CA

Natasha Griffith, MS, University of California—Los Angeles, Los Angeles, CA

This course will offer an understanding of key principles underlying the design of research and diagnostic laboratories. Participants will be introduced to laboratory design best practices as they relate to building zoning, operational efficiency, biosafety and biosecurity factors, supporting good lab protocols, and flexibility. Participants will engage in guided discussions, develop diagrams to illustrate best practice concepts, and analyze existing plans with respect to the design principles under discussion. The course will take participants through the process of developing a conceptual laboratory design from a functional space program. In groups, participants will produce conceptual diagrams and building plans for their facility and present their solutions to the class. Instructors will guide participants through the process by providing critical feedback on the designs as they progress and will offer brief presentations on some of the most pertinent design drivers. The goal of this course is to increase students' awareness of laboratory design issues and analytical processes which are critical for developing laboratory layouts, and to provide examples of well-designed laboratory buildings and spaces. The course is intended for those who want to be able to lead or aid in the creation of safe and efficient laboratory designs providing participants with a methodology for developing, analyzing, and refining laboratory designs.

Objectives:

- Summarize the range of issues or "design drivers" that must be considered when undertaking a laboratory design
- Diagram how good design practices work to enhance both biosafety and biosecurity
- Recognize the value of approaching design as an iterative and collaborative process

Suggested Background: Fundamentals of Biosafety, Principles and Practices of Biosafety

Target Audience: All Safety Professionals, New Biosafety Professionals, Architects, Engineers

Audience Level: Basic

8:00 am - 5:00 pm

2. The Essentials of Health and Safety at the Boundaries of Biosafety

Robert Emery, DrPH, CBSP, University of Texas Health Science Center—Houston, Houston, TX

Bruce Brown, DrPH, CBSP, University of Texas Southwestern Medical Center, Dallas, TX

Scott Patlovich, DrPH, CBSP, University of Texas Health Science Center—Houston, Houston, TX

In practice there is virtually no work setting where the occupational risks are limited solely to biological agents. Fire safety, occupational safety, and chemical safety risks are ubiquitous in laboratory and production settings, and sources of radiation can also be regularly encountered. Issues regarding insurance coverage and policy limitations can also arise. Given this diversity of possible risks, it is prudent for biosafety professionals to familiarize themselves with the essential aspects of these other specialty areas of loss control. This course is designed specifically to provide a baseline orientation to a series of parallel health and safety professions with which a biosafety professional commonly interacts. Each section begins with a discussion of the relative public health impact of each specialty area presented and ends with a description of the simple things a biosafety professional can do to assist in keeping the overall organization safe and compliant.

Objectives:

- Describe the five recognized steps of risk management process and why this is important for the biosafety profession
- Identify the basic elements of a fire and life system program, a chemical safety program, radiation safety program, and a comprehensive hazardous waste management program that can be easily accessed by a biosafety professional
- Summarize the risk represented by insider threats

Suggested Background: Fundamentals of Biosafety

Target Audience: All Biosafety Professionals, All Safety Professionals

Audience Level: Intermediate

8:00 am - 5:00 pm

3. Basic Risk Assessment

Chad Austin, PhD, University of Texas Health Science Center—Houston, Houston, TX

Anne-Sophie Brocard, PhD, RBP, CBSP, University of Texas Medical Branch—Galveston, Galveston, TX

Brandon Hatcher, PhD, University of Maryland—College Park, College Park, MD

Elizabeth Weirich, MS, CBSP, SM(NRCM), Centers for Disease Control and Prevention, Atlanta, GA

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. 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 and animal) 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 make recommendations on appropriate containment and practices required to work safely. The conclusions of the groups will be presented.

Objectives:

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

Suggested Background: Fundamentals of Biosafety

Target Audience: New Biosafety Professionals, Laboratory Workers

Audience Level: Basic

8:00 am - 12:00 pm

4. Synthetic Biology, Genome Editing Technologies, and Gene Drives

David Gillum, MS, RBP, Arizona State University, Tempe, AZ

Irene Mendoza, MS, Arizona State University, Tempe, AZ

Giorgio Scarpellini, MS, Arizona State University, Tempe, AZ

This course will provide a broad background and overview of biosafety and biosecurity concerns involving synthetic biology, gene-editing techniques, and gene drives. The course will provide an overview of the most common gene editing techniques including: clustered regularly interspaced short palindromic repeats (CRISPR)/Cas system, transcription activator-like effector nucleases (TALENs), zinc finger nucleases (ZFNs) and other systems and their use in modern biological research. This course will discuss the emerging field of gene drives which is when a genetic element spreads through a population of organisms over generations despite providing no reproductive advantage to the organism. Participants will have an opportunity to participate in activities and discuss case studies on these topics.

Objectives:

- Discuss the major foundational technologies for synthetic biology and aspects of biotechnology that enable the reprogramming of natural systems
- Restate the current applications of gene editing technologies (e.g., CRISPR), the risks, responsibilities, and biosafety/ethical considerations of these technologies
- Recall the safeguards, constraints, and potential for misuse of gene drives

Suggested Background: Micro/Molecular Biology 101, Principles and Practices of Biosafety

Target Audience: All Safety Professionals, Laboratory Workers, New Biosafety Professionals

Audience Level: Intermediate

1:00 pm - 5:00 pm

5. Integrating Biosecurity into Laboratory Biosafety Programs: An Active Learning Approach

Ryan Burnette, PhD, AT-RISK International, LLC, Chantilly, VA

Donald Callihan, PhD, AT-RISK International, LLC, Chantilly, VA

Nancy Connell, PhD, Rutgers New Jersey Medical School, Newark, NJ

Chuck Tobin, AT-RISK International, LLC, Chantilly, VA

Biosecurity programs should be developed and implemented at any institution where the loss or theft of biological material could result in negative consequences, such as harm to living things or environment, reputational loss, or financial/legal actions. Through an active learning process, this workshop will provide biosafety professionals and program managers with a strategic, tactical approach to building and integrating their biosecurity programs as a functional complement to existing biosafety programs. Participants will recognize the inherent differences between risk-based (biosafety) and threat-based (biosecurity) programs, while utilizing a system-wide vulnerability analysis model and exploring the fundamental activities of threat assessments and vulnerability analyses as a core function of biosecurity programs. Participants will examine the five pillars of security (physical security, personnel reliability, material control and accountability, transportation safeguards, and information management) as a framework for

building an integrated security program. The resulting integrated model of biosafety and biosecurity management systems will be discussed using case studies from both academic and industrial examples. Participants will be challenged by tabletop exercises that will simulate potential biosecurity threats and be provided with a package of biosecurity program documentation that will supplement workshop content, including materials specific to building or augmenting biosecurity programs, including: guidance on conducting threat assessments and vulnerability analyses, models for creating a biosecurity program, checklists to initiate development of biosecurity programs, and strategies for integrating biosecurity functionality into biosafety programs. The course will conclude with a 30-minute breakout session where attendees will be encouraged to initiate drafting their own next steps as they return to their institutions.

Objectives:

- Restate the fundamental components of a laboratory biosecurity program, differentiating between risk (biosafety) and threat (biosecurity) approaches
- Utilize the five pillars of security as a framework for an integrated biosecurity program
- Develop strategies for integrating functional biosecurity programs into laboratory biosafety and management systems

Suggested Background: Principles and Practices of Biosafety

Target Audience: All Biosafety Professionals, EHS/Lab Safety Professionals, Managers, and Security Professionals

Audience Level: Intermediate

Saturday, October 1, 2016

8:00 am - 5:00 pm

6. BSL-3 Experiments: A Review of Hands-on Practices and Procedures

Noman Siddiqi, PhD, Harvard T.H. Chan School of Public Health, Boston, MA

Investigators need to be cognizant of biosafety while designing and executing experiments in a BSL-3 laboratory. BSL-3 practices require a substantial upgrade from the BSL-2 practices. Most laboratories working with BSL-3 agents require additional training, mentoring, and classroom teaching for investigators. In this course, you will learn to recognize factors which drive the safety practices and how to incorporate best practices in routine procedures in BSL-3 laboratories. Participants will explore unique experimental set-ups, rationalize why certain procedures need additional safety precautions, participate in the various steps of doing a mock experiment, and learn about procedures like electroporation, measuring density and spectrophotometry, tissue culture, etc. There will be mix of exercises giving the participants a chance to design step-by-step protocol for experiments and discuss issues with existing or made-up protocols.

Objectives:

- Integrate risk assessment into design of experimental procedures
- Implement biosafety standards and practices in routine and unique experimental set-ups
- Recognize safety gaps in experimental procedures and address them

Suggested Background: Fundamentals of Biosafety, Risk Assessment, Biosafety Level-3 Design and Operations, Principles and Practices of Biosafety

Target Audience: Laboratory Workers, All Safety Professionals

Audience Level: Basic

8:00 am - 5:00 pm

7. Engineering for the Biosafety Professional—Part II

Juan Osorio, IE, World BioHazTec Corporation, North Bethesda, MD

Theodore Traum, PE, World BioHazTec Corporation, North Bethesda, MD

Brynte Johnson, MS, RBP, CBSP, SM(NRCM), World BioHazTec Corporation, North Bethesda, MD

Diego Osorio, CE, World BioHazTec Corporation, North Bethesda, MD

In a follow-up to “Engineering for the Biosafety Professional—Part I,” this course demonstrates biocontainment engineering principles and their applications in the proper operation and sustainability of a biocontainment laboratory. Included in the discussion will be concepts such as understanding various types of traditional HVAC design and emerging green design, comprehension of the purpose and information available from a building automation system, troubleshooting airflow reversals, understanding HVAC schematics, identifying redundancy needs, determining methodology for HVAC decontamination, deconstruction, and decommissioning. These basic concepts assist the biosafety professional in their interaction with facility personnel and designers of new construction, renovations, and ceasing of BSL-3 facilities operations using real-life examples and how they apply to biocontainment laboratories. More advanced engineering fundamentals will be discussed including HVAC sequence of

operations, ventilation risk assessment, developing failure scenarios, integration of energy conservation into the laboratory and compliance to Testing and Performance Verification Methodologies for Ventilation Systems for BSL-3 and ABSL-3 Facilities (ANSI Z9.14). Group exercises will be conducted for practical application of principals presented. Building on “Engineering for the Biosafety Professional—Part I,” this course will integrate examples that show cause and effect in real-life scenarios.

Objectives:

- Explain the engineering principles and basic engineering assessment tools
- Develop skills for the evaluation of engineering solutions and evaluation of drawings
- Paraphrase the design, construction, commissioning, and certification processes

Suggested Background: Engineering for the Biosafety Professional—Part I

Target Audience: All Biosafety Professionals, All Safety Professionals

Audience Level: Basic

8:00 am - 5:00 pm

8. Shipping Infectious Substances Certification Course

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 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 80% in order to be certified.

Objectives:

- Using principles of risk assessment, classify biological materials for shipping purposes as either Category A, Category B, Exempt or not regulated
- Demonstrate how to package, mark, label, and document shipments of infectious substances, Category A, Category B, and dry ice
- Complete a written exam to qualify for infectious substance shipping certification

Suggested Background: None

Target Audience: All Safety Professionals, Laboratory Workers, New Biosafety Professionals

Audience Level: Basic

8:00 am - 5:00 pm

9. Global Health Security Agenda: Transmission and Control of Infectious Disease

Patricia Delarosa, PhD, CBSP, RBP, National Institutes of Allergy and Infectious Disease, Rockville, MD

Dan Apple, Independent Biosecurity Consultant, Frederick, MD

Vera Ettenger, PhD, CBSP, RBP, Booz Allen Hamilton Incorporated, Springfield, VA

Lindsay Odell, PhD, Defense Threat Reduction Agency, Fort Belvoir, VA

Ben Perman, PhD, RBP, United States Coast Guard, Washington, DC

Susan Weekly, RBP, Department of Defense, Falls Church, VA

The Global Health Security Agenda (GHSA) is an international effort seeking to establish, improve, and modernize public health systems throughout the developing world, supporting detection and response requirements outlined by the International Health Regulations (IHR). This course introduces the GHSA, detailing current efforts in the control of infectious disease and emphasizing a One Health approach to emerging infectious disease containment. Common obstacles encountered in the development of health programs in low- to middle-income countries are discussed. Case studies in emerging infectious disease will review the transmission and control of infectious disease from a biosecurity perspective and analyzes biosecurity and biosafety elements important to public health security. Topics include an analysis of unique threats and vulnerabilities in public health including a review of the research on highly pathogenic avian influenza transmission in ferrets that initiated the dual use research of concern (DURC) debate and subsequent DURC oversight requirements.

Objectives:

- Identify the Global Health Security Agenda (GHSA) and the link between public health security and the biodefense impact of a public health system on biosecurity
- Restate the unique biosafety and biosecurity issues in public health highlighted in the case studies
- Explain the current review criteria for DURC used by the IRE

Suggested Background: Fundamentals of Biosafety, Risk Assessment
Target Audience: All Safety Professionals, New Biosafety Professionals, Biosecurity Professionals, Infection Control Specialists
Audience Level: Intermediate

8:00 am - 12:00 pm

10. IBC Basics

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

This course will present the function and administration of the Institutional Biosafety Committee (IBC). Delivered by expert staff from the National Institutes of Health (NIH) Office of Science Policy (OSP), IBC Basics will promote the professional development of those associated with IBC by providing an opportunity to learn about the NIH OBA, the content of the *NIH Guidelines for Research Involving Recombinant and Synthetic Nucleic Acid Molecules (NIH Guidelines)* and understand the range of responsibilities that IBC has under the *NIH Guidelines*.

Objectives:

- Summarize the content of the *NIH Guidelines*
- Restate the requirements for the IBC under the *NIH Guidelines*
- Recognize the partnership between NIH OBA, IBC, and Recombinant DNA Advisory Committees (RAC) and learn about the NIH OBA IBC site visit program

Suggested Background: None

Target Audience: New Biosafety Professionals, All IBC members

Audience Level: Basic

8:00 am - 12:00 pm

11. Applied Molecular Biology

Thomas Cremer, PhD, Atlanta, GA

The field of molecular biology has made major advances over the past two decades. While the Human Genome Project was completed in the early 2000s it has become apparent that genes are expressed under highly complex regulatory programs. Understanding genes and their regulation holds promise for major advances in molecular medicine. The modern biosafety professional needs to have a working understanding of this field in order to fully evaluate risk. This basic level course will cover fundamental concepts of molecular biology and review laboratory methodologies used in this field. Emphasis will be placed on biosafety considerations of work in modern molecular biology laboratories. This basic level course can help prepare participants for the advanced level course "Biosafety Considerations for RNA Interference (RNAi): MicroRNAs with Microbes and siRNA Therapeutics."

Objectives:

- Define the field of molecular biology and key terms used in this field
- Discuss molecular biology studies and publications
- Review modern laboratory techniques used in molecular biology and biosafety considerations with this work

Suggested Background: None

Target Audience: All Safety Professionals, New Biosafety Professionals

Audience Level: Basic

8:00 am - 12:00 pm

12. Bills, Laws, and Regulations: How Can We Make an Impact?

Debra Sharpe, MPH, RBP, Sharpe Solutions International, Birmingham, AL

This course will offer an introduction to the various branches of government, the legislative process, and government policy and procedures with regard to how regulations are promulgated. As biorisk management professionals, we understand how regulations affect our jobs and our work environment, but many of us do not understand how regulations are created or how the regulatory process works. Nor do we understand how we can impact the rule making process and potentially shape what the final regulation will look like. This course will identify the agencies that have the most impact on our members; discuss the various recent regulations; identify their potential impact to our organizations; and identify ways to be involved in the process to have a greater impact.

Objectives:

- Explain the branches of government and their role in the rulemaking process
- Describe the ways they can influence the regulatory process
- Identify resources that can help biorisk management professionals stay abreast of the latest regulations

Suggested Background: Fundamentals of Biosafety, Risk Assessment, Principles and Practices of Biosafety

Target Audience: All Safety Professionals, Experienced Biosafety Professionals, Risk Management Officers, Program Directors, Management Staff

Audience Level: Basic

1:00 pm - 5:00 pm

13. Biosafety Considerations for Human Gene Transfer

David Emery, PhD, WIRB Copernicus Group (WCG), Puyallup, WA

The application of recombinant gene transfer in the clinical setting has continued to expand, with an ever growing list of gene transfer tools and evidence of clinical successes. With successes and failures along the way, the field has accumulated a truly significant resource of information regarding the real and perceived risks associated with human gene transfer, information which the biosafety professional can use when assessing individual trials. The regulatory environment surrounding human gene transfer is quickly evolving, driven by efforts to streamline the review process by the National Institutes of Health (NIH) Recombinant DNA Advisory Committee (RAC), and the first time approval of a gene therapy agent by the Food and Drug Administration (FDA) in October 2015. This course will provide an overview of human gene transfer research, review the risk assessment considerations for biosafety professionals and Institutional Biosafety Committees, and outline the regulatory environment for human gene transfer research. New this year, the course will outline the proposed changes to the NIH Guidelines regarding the process for reviewing human gene transfer proposals, and how local Institutional Biosafety Committees and Institutional Review Boards will need to adapt. This course will review the regulatory requirements for clinical research with gene transfer agents after they have been approved by the FDA as drugs. Case studies and group discussion will be used to amplify the take home messages.

Objectives:

- Restate the risks and challenges associated with human gene transfer
- Identify the categories and risk groups of biological agents used in human gene transfer
- Summarize the key regulatory requirements from the NIH for gene transfer research

Suggested Background: Risk Assessment, Micro/Molecular Biology 101

Target Audience: Experienced Biosafety Professionals, Clinical Professionals

Audience Level: Intermediate

1:00 pm - 5:00 pm

14. Biosafety Considerations for RNA Interference (RNAi): MicroRNAs with Microbes and siRNA Therapeutics

Thomas Cremer, PhD, Atlanta, GA

RNA interference (RNAi) is a field of study within molecular biology that has only been known since the mid-1990s and has expanded into numerous areas of biomedical research with major advances in the mid- to late-2000s. While the research has rapidly advanced, little is reported on the biosafety implications associated with this work. This course will cover microRNAs (miRNAs) and small interfering RNAs (siRNAs) with particular emphasis on the risk assessment of manipulating microRNAs in viruses by case studies of recently published reports. MicroRNAs have been shown to be important for immunity and viral fitness; siRNAs have been used in basic research, though are being advanced into clinical trials as novel antimicrobials. This course will provide a fundamental understanding of RNAi and highlight tools that can be used to facilitate risk assessment of work done in this field.

Objectives:

- Investigate emerging topics in molecular biology within the biosafety community
- Identify tools and resources for facilitating risk assessment of RNAi experiments
- Review novel therapeutics based on RNAi technology and fundamental concepts in the emerging field

Suggested Background: Micro/Molecular Biology 101, Applied Molecular Biology

Target Audience: Experienced Biosafety Professionals, Laboratory Workers

Audience Level: Advanced

1:00 pm - 5:00 pm

15. Working Safely with Arthropods in the Laboratory

Partha Krishnan, PhD, RBP, Yale University, New Haven, CT

Saravanan Thangamani, PhD, University of Texas Medical Branch—Galveston, Galveston, TX

Research with live arthropods in a laboratory setting presents unique challenges in terms of biosafety issues, facility design, and safety practices. This course will focus on the biology of arthropods; life cycles, modes of transmission and epidemiology of diseases caused; risk assessment tools, engineering controls, personal protective equipment (PPE), good work practices while handling arthropods, the creation of SOPs for high-risk tasks, review of Arthropod Containment Guidelines (ACL) and facility design; emergency response procedures, including exposures and loss or release of arthropods from containment at low- and high-containment facilities. Ticks and mosquitoes will be the main arthropod classes that will be the focus of this course, with a brief discussion on working with fruit flies. Participants will learn of the risks posed by working with arthropods, especially when infected with a known pathogen, adopting effective biosafety controls to mitigate or eliminate these risks and handling exposures

competently. This course also caters to lab design architects and professionals who may be in need of expertise in factors to be taken into consideration before building or renovating laboratory space for arthropod work.

Objectives:

- Design adequate risk assessment of research using arthropods at all ACL levels (ACL1-ACL 4)
- Apply best practices and employ effective protocols while working with arthropods with examples SOPs
- Identify the most effective engineering controls to contain arthropods and to prevent inadvertent exposures

Suggested Background: Fundamentals of Biosafety, Micro/Molecular Biology 101, Principles and Practices of Biosafety

Target Audience: All Safety Professionals, Laboratory Workers, New Biosafety Professionals

Audience Level: Basic

Sunday, October 2, 2016

8:00 am - 5:00 pm

16. Advanced BSL-3 Facility Operations

Miguel A. Grimaldo, MEng, University of Texas Medical Branch—Galveston, Galveston, TX

John R. Henneman, MS, RBP, Pennsylvania State University, University Park, PA

J. Paul Jennette, MS, PE, RBP, Cornell College of Veterinary Medicine, Ithaca, NY

This course is a follow-up to the BSL-3 Facility Operations and Management focusing on detailed aspects of biocontainment operations of BSL-3, ABSL-3, and enhanced BSL-3 laboratories. It will cover risk assessments for biocontainment facilities; facility operations and maintenance SOPs; maintenance personnel training requirements; solid and liquid waste decontamination equipment, procedures, validations and cycle developments; area decontamination methodologies, procedures and validations; filtration systems and validation and testing process; ventilation control methodologies and ventilation equipment configuration; facility testing during normal and failure conditions of the ventilation system; test documentation and record keeping.

Objectives:

- Explain the facility verification process in detail, including recommended test methodologies
- Identify methodologies for decontamination of areas, equipment, filters and waste
- Restate the training requirements for facility personnel accessing the biocontainment areas and elements of biocontainment facility risk assessments

Suggested Background: Fundamentals of Biosafety, Biosafety Level 3-Design and Operations, Principles and Practices of Biosafety

Target Audience: All Safety Professionals, Experienced Biosafety Professionals

Audience Level: Advanced

8:00 am - 5:00 pm

17. Intermediate Threat Assessment for Laboratory Biosecurity Programs

Ben Perman, PhD, RBP, U.S. Coast Guard, Washington, DC

Lindsay Odell, PhD, Defense Threat Reduction Agency, Fort Belvoir, VA

Jason Griffin, Booz Allen Hamilton, Inc., McLean, VA

This course is a continuation of the basic threat assessment course that explains how to structure a sustainable institutional threat assessment program in a biomedical laboratory setting. The purpose of this course is to provide laboratory staff, security managers, and responsible officials with intermediate threat assessment skills in order to identify and classify threats and effectively implement personnel security procedures that directly mitigate those threats at their institutions. The course material supports implementation of suitability and reliability programs that comply with the U.S. Select Agent Regulations for Tier 1 agents. The course is not limited to Tier 1 biosecurity solutions because it provides cost effective and minimally intrusive approaches to personnel security that is broadly applicable to all biomedical laboratories. This course targets laboratory staff including: Responsible Officials, Principal Investigators, laboratory managers, and research scientists, and non-scientific staff including Human Resource administration and facility security officers responsible for developing and/or implementing effective biosecurity measures. Theoretical concepts will be put into practice in a complex interactive, three-hour table top exercise involving a realistic laboratory security problem that draws on the material presented in the lecture and case studies.

Objectives:

- Describe the application of intermediate threat assessment techniques in a laboratory biosecurity program and how threat assessment can be implemented in a successful insider threat mitigation program
- Characterize specific personal security vulnerabilities or indicators and link these vulnerabilities to threats
- Summarize the purpose and requirements of suitability, reliability and other personnel security programs and how to successfully integrate threat assessment into these programs

Suggested Background: Basic Threat Assessment for Laboratory Biosecurity Programs
Target Audience: All Biosafety Professionals, Laboratory Workers
Audience Level: Intermediate

8:00 am - 5:00 pm

18. Plant Research: Regulation, Guidelines, Risk Assessment, and Containment Requirements

Dann Adair, BS, Conviron, North Branch, MN

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

Kirk Martin, DPM, CBSP, United States Department of Agriculture, Owings, MD

Biosafety needs for plant research often parallel but frequently diverge from the principles and practices in laboratories conducting non-plant research. This is primarily due to the goal of research and subject protection versus environmental protection. The latter is the primary goal when working with plants and their related organisms if there is any risk of creating disease or weed issues in natural or managed environments. Research on plants and their associated organisms routinely conducted in laboratories, greenhouses, growth chambers, growth rooms, and screen houses is “in containment” versus research conducted in the field or natural ecosystem. This presents a range of challenges and opportunities for conducting quality research while meeting any regulations or guidelines. Due to the limited guidance on the topic and the relatively small niche of plant biosafety, attendees are presented a unique opportunity. The course will cover the fundamentals of plant pathology, plant pest interactions, and molecular technologies used in plants necessary to inform risk assessment for research. It will also explore various design and construction techniques, equipment, and management concepts needed to meet programmatic and regulatory requirements. USDA ARS, APHIS, NIH, and selected international guidelines and regulations will be referenced case studies and interactive learning exercises will provide an opportunity to apply knowledge and skills gained in the course. Participants will leave the course with skills to provide the appropriate oversight for plant research activity.

Objectives:

- Restate the guidelines and regulations when working with plants under permits, biotechnology, and for local institutional requirements
- Assessing the risks for plant research informally to determine the need for further assessment, permit, and institutional oversight
- Describe plant research facility designs and equipment

Suggested Background: Fundamentals of Biosafety, Micro/Molecular Biology 101, Principles and Practices of Biosafety

Target Audience: All Biosafety Professionals, Laboratory Workers

Audience Level: Basic

8:00 am - 5:00 pm

19. Integrating Your Biosafety Program into a Biorisk Management System

Kalpana Rengarajan, PhD, RBP, Emory University, Atlanta, GA

Benjamin Brodsky, PhD, Sandia National Laboratories, Albuquerque, NM

The function of most biosafety programs is driven by the need to comply with various local and federal requirements. This approach can result in a program that is compliant, but still does not address all areas where biorisk exists. A management system approach can assist an institution assure compliance and address both the breadth of all the functional aspects biosafety and biosecurity across all the roles at an institution, from the top management downwards. Provisions for a Biorisk Management System have been developed in the CEN Workshop Agreement (CWA) documents 15793 and 16393. This course will allow participants to begin to integrate the biorisk management system approach into their current biosafety program by using the CWA documents to identify gaps, establish goals, objectives, roles, and responsibilities to address priority gaps. This course will be very interactive and hands-on, using tools, tips, and lessons-learned from the facilitators and the participants.

Objectives:

- Identify key components of management systems and how those can apply to and enhance a biosafety program
- Recognize gaps in your current biosafety program and to plan a risk-based strategy to address those gaps
- Utilize existing tools and resources to guide implementation of a biorisk management system approach

Suggested Background: None

Target Audience: All Biosafety Professionals, Laboratory Workers

Audience Level: Intermediate

8:00 am - 12:00 pm

20. Enhancing Biosafety and Biosecurity in Public Health Laboratories

Brit Hart, MS, Association of Public Health Laboratories, Silver Spring, MD

Maureen Sullivan, MPH, Minnesota Public Health Laboratory Division, Saint Paul, MN

David Hill, CBSP, CIH, New York State Department of Health, Albany, NY

This course will be a primer and refresher biosafety and biosecurity course specifically tailored to the biosafety officers that serve in state, territorial and local public health laboratories (PHLs). In 2015, the Association of Public Health Laboratories (APHL) was awarded a three year cooperative agreement to serve as subject matter experts (SME) for state, territorial and local PHLs that were recipients of the Centers for Disease Control and Prevention (CDC) Epidemiology and Laboratory Capacity (ELC) for Infectious Diseases Ebola Supplemental to enhance biosafety and biosecurity in public health laboratories. With this agreement, APHL's goals are to enhance PHL biosafety capacity and improve laboratory coordination and outreach. This course will cover enhancing PHL biosafety capacity and provide strategies for improving laboratory coordination and outreach to sentinel clinical labs. There will be a brief overview of the APHL work plan for enhancing biosafety capacity and current programs. In addition tools, guidance documents, training resources, and components of a successful biosafety plan will be provided by APHL for enhancing biosafety capacity in PHLs.

Objectives:

- Explain the key components in developing a successful biosafety and biosecurity plan for public health laboratories
- Describe the key components to developing a successful biosafety/biosecurity outreach program for sentinel clinical labs

Suggested Background: Knowledge of Public Health Laboratories

Target Audience: All Biosafety Professionals, All Safety Professionals, Biosafety Outreach Officers, and Laboratory Directors in Governmental, Public Health, and Private Clinical Laboratories

Audience Level: Basic

8:00 am - 12:00 pm

21. Identification, Treatment, Research, and Containment of Neglected Parasitic Diseases

Susanne Savely, DrPH, RBP, Baylor College of Medicine, Houston, TX

This course will provide an opportunity for participants to learn and ask questions about Chagas disease, neurocysticercosis, toxocariasis, toxoplasmosis, and trichomoniasis, which together affect more than three and a half million people in the U.S. These five diseases have been targeted for action by the Centers for Disease Control and Prevention (CDC), mainly due to the significant number of people affected and the severity of the illnesses caused by them. This course is for those professionals interested in learning more about the subject and its current status. In order to accommodate multiple learning styles, this course will use a combination of lecture, videos, case studies, and interactive activities to deliver and reinforce the information presented.

Objectives:

- List the five neglected parasitic diseases targeted for research in the U.S. and the current standard of care for treatment
- Discuss the current status of research on the five neglected parasitic diseases
- Explain current containment issues, recommendations, and the current standard of care for infected patients

Suggested Background: Familiarity with microbiology, Principles and Practices of Biosafety

Target Audience: All Biosafety Professionals, Laboratory Workers

Audience Level: Intermediate

8:00 am - 12:00 pm

22. Value Driven Safety for Researcher and Healthcare Provider Success

Patrick Conley, CBSP, University of Texas Southwestern Medical Center, Dallas, TX

The true success of a biosafety program is defined by the value that it brings to the customers it serves. As biosafety professionals, we must be able to recognize what drives value in our various safety programs and processes. This recognition requires an understanding of the customer's needs, which is vital to the design and implementation of quality driven safety programs, services, and outreach. This course will identify the common customers of biosafety professionals and will discuss the drivers of their work practices, concerns, and needs including how biosafety professionals can develop programs that provide services and outreach to help them succeed. Additionally, the course will cover how increased regulations, decreased funding opportunities, and changes to the Fair Labor Standards Act (FLSA) may shift customer behavior. Staying aware of customer needs and recognizing when their needs change can dramatically enhance business relationships and cooperation between biosafety professionals and their customers. These biosafety professional/customer interactions provide the basic foundation needed to establish a culture of safety which, by its basic nature, can ensure compliance with pertinent regulations.

Objectives:

- Describe the common customers who receive services from biosafety professionals
- Anticipate and recognize the factors that drive and direct the interactions between these customers and biosafety professionals
- Discuss methods to build value based and service driven biosafety programs that promote safety and customer success

Suggested Background: Fundamentals of Biosafety, Principles and Practices of Biosafety, Program Management

Target Audience: All Safety Professionals, Laboratory Workers, New Biosafety Professionals

Audience Level: Intermediate

8:00 am - 12:00 pm

23. Commissioning for the Containment Laboratory

Joby Evans, PE, Merrick & Company, Decatur, GA

Chris Kiley, PE, Merrick & Company, Duluth, GA

Ryan Gregory, PEng, Merrick Canada ULC, Kanata, Ontario, Canada

Commissioning and/or the resulting documentation from the commissioning process of the biocontainment laboratory are not always clearly understood by the biosafety personnel. Many biosafety professionals are, at times, spectators and bystanders in the commissioning of their facilities. The biosafety officer will benefit by having a fundamental understanding of the commissioning process and the resulting documentation. This understanding should allow them to articulate the data required from their commissioning agent and assure the needs are met for the Federal Select Agent Program. Instructors will review the phases of the commissioning process; design, construction, acceptance, and warranty. This knowledge base will allow the biosafety professional to understand how commissioning assists in providing a properly operating facility and the risk when it does not. The knowledge gained will allow the professional to check the containment spaces' performance should there be any questions. The biosafety officer can then observe (or actively participate) in the commissioning process and fully understand the methodology, the tools, and the data results. This course will review the common biocontainment guidelines including *BMBL*, *NIH*, and *ANSI* used for containment commissioning. This interactive course will review the standard tools used to collect data, demonstrate compliance, and document the results. Participants will use the tools to gain a full understanding of the process and tools and are invited to bring questions or scenarios as to how we may perform a test. The instructors will present some of the commonly encountered issues observed in the field, demonstrating how the issues are identified and present specific means and methods to mitigate the issues. The understanding of the commissioning process, the commissioning report, and the tools used will assist the biosafety professional to confidently respond to the Select Agent inspector's questions regarding the commissioning results of their facility.

Objectives:

- Describe the commissioning process and commissioning report
- Recognize the tools used in commissioning and the data outputs and their meaning
- Identify and resolve commonly encountered issues

Suggested Background: None

Target Audience: All Safety Professionals, New Biosafety Professionals, Facility Operations and Maintenance Personnel

Audience Level: Basic

8:00 am - 12:00 pm

24. Best Practices in Teaching Technical Topics

David Casavant, Sustainable Workplace Alliance, Lake Wales, FL

Studies show that nearly 75% of the population fears public speaking. An HR salary study has determined that employees who make presentations earn an average of \$9,000 per year more than employees who are not responsible for making presentations. Do you provide training on difficult compliance subjects to your employees? In a recent survey of those who provide technical training, we found that the #1 problem was "How to make the training interesting." Four of the top five issues for trainers involved not technical issues, but how to be a better, more polished speaker (without getting so nervous). This course will reveal easy-to-implement ideas that will help you become more comfortable in front of the room and make your message more impactful. Whether a new trainer or a seasoned veteran, you will find this training presentation helpful. We share cutting edge ideas that will help you easily explain difficult ideas and help you get your message across to your audience.

Objectives:

- Recall the use of a participatory-based training experience (PTE) to encourage retention and change employee behavior
- Describe how to handle the "disruptive," "know it all," or otherwise difficult student
- Explain the use of real-time polling, digital quizzes, and other online tools to improve your message

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

1:00 pm - 5:00 pm

25. Public Health Hazard Planning

Tony Gemmellaro, MS, Triumvirate Environmental, Somerville, MA

Julien Farland, Jr., RBP, CBSP, Boston Public Health Commission, Boston, MA

Mark Liffers, MS, CIH, CSP, Triumvirate Environmental, Somerville, MA

This course will focus on infectious disease outbreaks, food-or water-borne illnesses, and incidents involving the intentional release of hazardous agents. Management strategies are reviewed, including surveillance and detection of agents or effected individuals, prevention of exposure to agents of concern, capacity and resource planning, collaboration with the medical and public health communities, and actions in multiple casualty/fatality events. Case studies are examined and stressed.

Objectives:

- Describe the categories of disease-causing agents, their methods of propagation, and effects
- Review strategies used by public health agencies and the interface with emergency management agencies and activities
- Restate the concerns of special populations in planning

Suggested Background: None

Target Audience: All Safety Professionals, Laboratory Workers, New Biosafety Professionals

Audience Level: Basic

1:00 pm - 5:00 pm

26. How to Respond to Emergency Situations in Biocontainment Laboratories

David Harbourt, PhD, RBP, CBSP, SM(NRCM), U.S. Army Medical Research Institute of Infectious Disease, Fort Detrick, MD

Gary Carter, National Strategic Research Institute, Omaha, NE

Joanne Parsley, U.S. Army Medical Research Institute of Infectious Disease, Fort Detrick, MD

Kristie Yeakle, RBP, Department of Army Inspector General, Washington, DC

It is important for biosafety professionals to understand how to respond to emergency response situations that could affect operations in containment laboratories. Emergency situations can affect a wide range of facility operations (electrical failures, plumbing, heating/ventilation/air conditioning [HVAC], etc.) and often occur with little or no warning to the biosafety professionals, scientific staff, or support staff. Biosafety professionals need to be able to thoroughly understand how their facility and personnel function during normal operations in order to aid in preparation for significant events. In addition to understanding their facility and personnel, it is also vital for biosafety professionals to know who the key decision makers are in their facility for situations that could potentially result in short- or long-term disruptions to operations. By understanding the critical information that is needed for the key decision makers during emergency scenarios, biosafety professionals can help ensure that they are prepared when situations arise in the future. This course is intended to cover some basic information of emergency response situations along with the key features of a containment laboratory that may be affected during an emergency situation. This course will go over the key aspects of an HVAC, building electrical design, and plumbing systems. This is not an engineering course; it is intended to be a brief overview so biosafety professionals understand the right questions to ask during emergency situations. The course will be separated into five sections, basics of emergency response, HVAC, plumbing, electrical failures, and potential occupational exposures. Each section will cover the critical information that biosafety professionals must understand in each area followed by a series of case studies based on real-world emergency response situations and potential occupational exposures in biocontainment laboratories.

Objectives:

- Describe the basics of emergency response and how it relates to the decision making process during an emergency response situation affecting biocontainment laboratory operations
- Restate who the key decision makers are in your facility and who can authorize decisions that will impact mission operations
- Identify lessons learned in after action reviews from case studies and potential occupational exposures and apply them to an incident response plan if applicable

Suggested Background: None

Target Audience: All Safety Professionals, All Biosafety Professionals

Audience Level: Intermediate

1:00 pm - 5:00 pm

27. Strategies to Customize and Streamline the Institutional Biosafety Committee (IBC)

Chris Jenkins, PhD, Consultant, Eureka, MO

Strategies to customize and streamline the Institutional Biosafety Committee (IBC) is intended to provide a deeper understanding and tools to assist experienced biosafety professionals, those new to the field, and research administrators tasked with interfacing or overseeing the IBC. An updated survey will be completed by the instructor of all IBCs which will be reviewed and dissected by participants. A discussion of best practices from the instructor's experiences along with the participants will delve beyond recombinant DNA registrations the NIH Office of Biotechnology Activities requires and form additional options for participants to apply at their institution. As IBC's are increasingly tasked with oversight beyond recombinant DNA, this course will provide participants with methods to streamline IBC operations, increase IBC member participation, and provide the IBC as a resource to the research community. Sources and methods include the latest research and literature on IBC oversight, best practices, and the instructor's experience.

Objectives:

- Describe and demonstrate techniques for administering an effective Institutional Biosafety Committee
- Explain methodologies to annually benchmark the Institutional Biosafety Committee internally and externally
- Quantify the time and effort of regulatory impact on the role of the biosafety office and research office

Suggested Background: Fundamentals of Biosafety, Risk Assessment

Target Audience: All Biosafety Professionals, Research Administrators

Audience Level: Intermediate

1:00 pm - 5:00 pm

28. Infectious Substance Shipping Refresher

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 three 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 80% in order to be certified.

Objectives:

- Apply risk assessment principles to regulations in order to properly classify biological shipments as Category A, Category B or exempt
- Demonstrate proper packaging, marking, labeling and documentation of class 6.2 shipments
- Restate recent changes to the regulations

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

Opening Reception

The Opening Reception will be held on Sunday, October 2 from 6:30 - 8:00 pm in the Exhibit Hall.

Scientific Program

Monday, October 3, 2016

7:00 - 5:00 pm	Registration
7:00 - 8:00 am	Continental Breakfast in Exhibit Hall
7:00 - 4:00 pm	Vendor Exhibits
8:00 - 8:05 am	Welcome Master of Ceremonies Melissa Morland, MS, MBA, RBP, CBSP, University of Maryland—Baltimore, Baltimore, MD
8:05 - 8:10 am	Local Arrangements Committee Welcome Patrick Conley, CBSP, University of Texas Southwestern Medical Center, Dallas, TX
8:10 - 8:15 am	Scientific Program Committee Welcome Darlene Ward, RBP, Florida Atlantic University, Boca Raton, FL
8:15 - 8:30 am	ABSA President's Address Melissa Morland, MS, MBA, RBP, CBSP, University of Maryland—Baltimore, Baltimore, MD
Session I	Arnold G. Wedum Memorial Lecture Award
8:30 - 9:30 am	Introduction: Betsy Matos, PhD, RBP, Iowa State University, Ames, IA Biosafety from the Field to the Lab Tony Schountz, PhD, Colorado State University, Fort Collins, CO
Session II	Biosafety Regulatory Issues
9:30 - 9:50 am	Moderator: Francine Rogers, MS, RBP, CBSP, University of Tennessee Health Science Center, Memphis, TN Employee, Contractor, or Student? Four Legal Decisions Illustrate Differences in Laboratory Worker Protections Casey Skvorc, PhD, JD, National Institutes of Health, Bethesda, MD
9:50 - 10:10 am	Strategy and Successes: The Global Biorisk Management Curriculum LouAnn Burnett, CBSP, Sandia National Laboratories, Albuquerque, NM
10:10 - 10:30 am	Updates from NIH Kathryn Harris, PhD, RBP, National Institutes of Health, Bethesda, MD
10:30 - 11:00 am	Exhibits, Posters, and Coffee Break
Session III	Invited Speaker
11:00 - 11:50 am	Introduction: Meghan Seltzer, PhD, HHMI Janelia Research Campus, Ashburn, VA Using Your Inner Insect to Control Virus Infections Ben tenOever, PhD, Mount Sinai School of Medicine, New York, NY
12:00 - 1:30 pm	Exhibits, Posters, and Lunch
Session IV	Poster Session
12:30 - 1:30 pm	<i>Presenters must be available during the session.</i>
Session V	Biocontainment Incident Response
1:30 - 1:50 pm	Moderator: Maya Nair, PhD, RBP, University of North Texas Health Science Center, Fort Worth, TX Not a Zombie Apocalypse, but Still a BSL-3 Emergency Drill Betsy Matos, PhD, RBP, Iowa State University, Ames, IA

1:50 - 2:10 pm	Medical Response to Incidents in High-Containment Laboratories Stephen Lever, PhD, DSTL Porton Down, Salisbury, United Kingdom
2:10 - 2:30 pm	CPR, AED, and BSL-3 Margaret Juergensmeyer, PhD, RBP, Institute for Food Safety and Health, Bedford Park, IL
Session VI	National Science Advisory Board Update
2:30 - 3:00 pm	Moderator: Shelley Jones, MS, RBP, Northern Arizona University, Flagstaff, AZ National Science Advisory Board for Biosecurity and Gain of Function Overview Joseph Kanabrocki, PhD, University of Chicago, Chicago, IL
3:00 - 3:30 pm	Exhibits, Posters, and Coffee Break
Session VII	Occupational Health and Monitoring
3:30 - 3:50 pm	Moderator: James W. Klenner, MSc, MPH, MPA, RBP, CBSP, Indiana University—Purdue University Indianapolis, Indianapolis, IN Is There a Doctor in the House? The Role of a Medical Officer Integrated into Laboratory Safety Procedures Paul Russell, PhD, DSTL Porton Down, Salisbury, United Kingdom
3:50 - 4:10 pm	Strategies for Implementing A Comprehensive Occupational Health Program Molly Stitt-Fischer, PhD, CPH, CBSP, SM(NRCM), University of Pittsburgh, Pittsburgh, PA
4:10 - 4:30 pm	Using an Integrated Governance Database Reporting System for Laboratory and Other Incidents at Public Health England Heather Sheeley, MS, Public Health England, Porton Down, Salisbury, United Kingdom
4:30 - 5:00 pm	Questions and Discussion
5:00 - Close	Members' Business Meeting <i>Door prizes will be awarded—must be present to win.</i>

Tuesday, October 4, 2016

7:00 - 5:00 pm	Registration
7:00 - 8:00 am	Continental Breakfast in Exhibit Hall
7:00 - 4:00 pm	Vendor Exhibits
8:00 - 8:05 am	Welcome Master of Ceremonies Maureen O'Leary, PhD, CBSP, Dartmouth College, Hanover, NH
Session VIII	Griffin Lecture Award
8:05 - 8:20 am	Introduction: Caryl Griffin, MSN, MDiv, Elizabeth R. Griffin Research Foundation, Kingsport, TN
8:20 - 9:20 am	The Open Philanthropy Project—Biosecurity and Pandemic Preparedness Initiative Jaime Yassif, PhD, Open Philanthropy Project, San Francisco, CA
Session IX	International Biosafety
9:20 - 9:40 am	Moderator: Hsiang-Ming Wang, PhD, SM(NRCM), University of Chicago, Chicago, IL Implementing the Requirements for the Biosafety Level 3 Facility at the Agricultural Research Council—Onderstepoort Veterinary Institute Bontsi Mochotlhoane, Agricultural Research Council, Onderstepoort Veterinary Institute Pretoria, South Africa
9:40 - 10:00 am	Improvement of Microorganisms Classification Methodology into Risk Groups Aline Baldo, DVM, PhD Scientific Institute of Public Health, Brussels, Belgium
10:00 - 10:20 am	Adapting Biosecurity to Meet the Demands of Emerging Infectious Disease: Applications for Global Health Security Ryan Burnette, PhD, AT-RISK International, LLC, Chantilly, VA
10:20 - 10:50 am	Exhibits, Posters, and Coffee Break

Session X	Eagleson Lecture Award
11:00 - 12:00 pm	Introduction: Mary Ann Sondrini, Eagleson Institute, Sanford, ME Zika Virus—A Reemerged Arbovirus Nikolaos Vasilakis, PhD, University of Texas Medical Branch—Galveston, Galveston, TX
12:00 - 1:00 pm	Exhibits, Posters, and Lunch
Session XI	Poster Session
1:00 - 2:00 pm	<i>Presenters must be available during the session.</i>
Session XII	Laboratory Practices
2:00 - 2:20 pm	Moderator: Cristine C. Lawson, PhD, Nationals Institute of Health, Fort Detrick, MD Emerging Infectious Diseases in Academic Research: Biosafety Lessons Learned from Work with Zika Virus Esmeralda Meyer, Emory University, Atlanta, GA
2:20 - 2:40 pm	Biosafety Cabinetry: Influence of Personnel Activities Thomas Hinrichs, Berner International GmbH, Elmshorn, Germany
2:40 - 3:00 pm	Volatile Chemicals and Class II Type A2 “Recirculated” BSCs: How Much is Safe? Kara Held, Baker, Sanford, ME
3:00 - 3:20 pm	Get the Kettle Going—Why Checking Your Steam Sterilization Procedures for Liquids is so Important Daniel Kumin, Institute of Virology and Immunology, Mittelhausern, Switzerland
3:30 - 4:00 pm	Exhibits, Posters, and Coffee Break
Session XIII	Specialized Topics in Biosafety
4:00 - 4:20 pm	Moderator: Claudia Gentry-Weeks, PhD, CBSP, Colorado State University, Fort Collins, CO Implementation of Biosafety Guidelines for Undergraduate Teaching Laboratories Jessica McCormick-Ell, PhD, RBP, CBSP, SM(NRCM), Rutgers, The State University of New Jersey, Newark, NJ
4:20 - 4:40 pm	Facility for Large-Scale BSL-2/GMO-2 and Multiproduct GMP Production Henriette Schubert, NNE Pharmaplan A/S, Gentofte, Denmark
4:40 - 5:00 pm	New Approach For Designing Public and Animal Health Diagnostic Laboratories William Arndt, PhD, Sandia National Laboratories, Albuquerque, NM
6:00 - 10:00 pm	Banquet at the Gaylord Texan

Wednesday, October 5, 2016

7:00 - 5:00 pm	Registration
7:00 - 8:15 am	Continental Breakfast
8:15 - 8:20 am	Welcome Master of Ceremonies
Session XIV	Safety Culture and Procedures
8:20 - 8:40 am	Moderator: Jessica McCormick-Ell, PhD, RBP, CBSP, SM(NRCM), Rutgers, The State University of New Jersey, Newark, NJ Safety Culture in Life Sciences Laboratories: Time for Action Donald Callihan, PhD, AT-RISK International, LLC, Chantilly, VA
8:40 - 9:00 am	Using Standard Operating Procedures to Bridge Facility Gaps Daniel Frasier, Cornerstone Commissioning, Inc., Boxford, MA
9:00 - 9:20 am	Containment of Polioviruses: Moving Barriers Delemarre Frans, Janssen Vaccines, Leiden, Netherlands
9:20 - 9:40 am	Safety Culture in Life Science Laboratories: Through the Looking Glass Fitz Trumble, URS Professional Solutions, Aiken, SC
9:40 - 10:10 am	Coffee Break

Session XV	Biocontainment Facilities
10:10 - 10:30 am	Moderator: Beth Reeves, CBSP, Indiana State Department of Health, Indianapolis, IN Why Do Biocontainment Facilities Fail Joby Evans, PE, CxA, Merrick & Company, Atlanta, GA
10:30 - 10:50 am	Withstanding High Wind Impacts on Biocontainment Facilities Eugene Cole, U.S. Department of Homeland Security, Manhattan, KS
10:50 - 11:10 am	Inactivation Method for Viruses that Preserves Structure and Molecular Function Katherine Schneider, National Biodefense Analysis and Countermeasures Center, Fort Detrick, MD
11:10 - 11:30 am	Commissioning a Critical Strategy for Risk Management in the BSL-3 Environment Charlie Bean, Environmental Health & Engineering, Needham, MA
11:35 - 1:30 pm	Honor Awards and Special Recognition Luncheon Presenter: Melissa Morland, MS, MBA, RBP, CBSP, University of Maryland—Baltimore, Baltimore, MD Arnold G. Wedum Distinguished Achievement Award Everett J. Hanel, Jr. Presidential Award John H. Richardson Special Recognition Award International and National Poster Awards Hashimoto Award for Service and Honor Recognition of Certified Biosafety Professionals and Registered Biosafety Professionals Presenters: Donald Wang, MPH, RBP, CBSP, Fred Hutchinson Cancer Research Center, Seattle, WA R. Thomas Leonard, PhD, CBSP, University of Virginia, Charlottesville, VA
Session XVI	Robert I. Gross Student Award
1:30 - 2:00 pm	Introduction: Noman Siddiqi, PhD, RBP, Harvard School of Public Health, Boston, MA Inactivation of Bacterial Pathogens Using an UVC Emitting Device for Whole Room Sanitization Vincent Manna, Rowan University School of Osteopathic Medicine, Stratford, NJ
Session XVII	Richard Knudsen Award
2:00 - 2:30 pm	Introduction: David Gillum, MS, RBP, Arizona State University, Tempe, AZ A Laboratory-associated Outbreak of Cryptosporidiosis Matthew S. Philpott, Oregon State University, Corvallis, Oregon
Session XVIII	Biosafety Competency and Training
2:30 - 2:50 pm	Moderator: Marian Downing, RBP, CBSP, WCG Biosafety, Kemah, TX Current Scope of Practice and Core Competencies Enitra N. Jones, PhD, National Biosafety and Biocontainment Training Program, Bethesda, MD
2:50 - 3:10 pm	Give Them the Carrot! Using Strategic Program Improvements to Increase Researcher Engagement Shane Gillooly, Georgia Institute of Technology, Atlanta, GA
3:10 - 3:40 pm	Coffee Break
Session XIX	Plant Biosafety
3:40 - 4:00 pm	Moderator: Judy LaDuc, RBP, University of Massachusetts, Amherst, MA Biosafety of Plant Research in Greenhouses and Other Specialized Containment Facilities Dann Adair, BS, Conviron, North Branch, MN
4:00 - 4:20 pm	Biosafety Levels Weren't Developed for Plant Pathogen Research: Perhaps Biocontainment Levels are More Appropriate Kirk Martin, DPM, CBSP, U.S. Department of Agriculture, Owings, MD
4:20 - 4:40 pm	How Deep is Too Deep: A Validation Study of Greenhouse Waste Decontamination at University of Nebraska—Lincoln Matthew Anderson, PhD, RBP, University of Nebraska—Lincoln, Lincoln, NE
4:40 - 4:55 pm	Questions and Discussion
4:55 pm	Close of Conference Master of Ceremonies Maureen O'Leary, PhD, CBSP, Dartmouth College, Hanover, NH

Registration Form

59th Annual Biological Safety Conference September 30 – October 5, 2016

ABSA International Member ID Number: _____ Nonmember

Last Name: _____ First Name: _____
 Organization: _____
 Address: _____
 City: _____ State: _____ Zip: _____
 Phone: _____ E-mail: _____
 Emergency Contact: _____
 Phone: _____

Conference Fees	Pre Sept. 9	Post Sept. 9	Amount
ABSA International Member	\$760	\$810	\$ _____
Nonmember	\$1,000	\$1,050	\$ _____
Member of ABSA International Affiliate	\$880	\$930	\$ _____
<i>Discount Code:</i>			
One-day Member (day _____)	\$260	\$300	\$ _____
One-day Nonmember (day _____)	\$360	\$400	\$ _____
Emeritus Member	\$380	\$430	\$ _____
Opening Reception (additional)	\$95	\$95	\$ _____
Exhibit Only Pass (Monday)	\$15	\$15	\$ _____
Exhibit Only Pass (Tuesday)	\$15	\$15	\$ _____
2016 Individual Dues	\$210	\$210	\$ _____

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

Dietary Restrictions: _____
 Additional lunch tickets (\$50 each) \$ _____
 Additional banquet tickets (\$150 each) \$ _____
 Total from course(s) \$ _____
 Total amount enclosed or to be charged: \$ _____

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

Visa MasterCard American Express Check Enclosed
 Card #: _____ Exp. Date: _____
 Signature: _____
 Print Cardholder's Name: _____

Course space is limited. No course substitutions or changes prior to the conference. Please visit the ABSA International web site at www.absaconference.org for course availability and online registration. Mail to: ABSA International, 1200 Allanson Road, Mundelein, IL 60060-3808 or fax to 847-566-4580. **Registration forms must be faxed to the ABSA International Office to receive the Affiliate Member discount.**

Preconference Courses

Friday, September 30, 2016

	Member	Nonmember	Amount
1. Laboratory Design Principles and Practices	\$595	\$645	\$ _____
2. The Essentials of Health and Safety at the Boundaries of Biosafety	\$595	\$645	\$ _____
3. Basic Risk Assessment	\$595	\$645	\$ _____
4. Synthetic Biology, Genome Editing Technologies, and Gene Drives	\$350	\$400	\$ _____
5. Integrating Biosecurity into Laboratory Biosafety Programs	\$350	\$400	\$ _____

Saturday, October 1, 2016

6. BSL-3 Experiments—A Review of Hands-on Practices and Procedures	\$595	\$645	\$ _____
7. Engineering for the Biosafety Professional—Part II	\$595	\$645	\$ _____
8. Shipping Infectious Substances Certification Course	\$595	\$645	\$ _____
9. Global Health Security Agenda	\$595	\$645	\$ _____
10. IBC Basics	\$350	\$400	\$ _____
11. Applied Molecular Biology	\$350	\$400	\$ _____
12. Bills, Laws, and Regulations	\$350	\$400	\$ _____
13. Biosafety Considerations for Human Gene Transfer	\$350	\$400	\$ _____
14. Biosafety Considerations for RNAi	\$350	\$400	\$ _____
15. Working Safety with Arthropods in the Laboratory	\$350	\$400	\$ _____

Sunday, October 2, 2016

16. Advanced BSL-3 Facility Operations	\$595	\$645	\$ _____
17. Intermediate Threat Assessment for Laboratory Biosecurity Programs	\$595	\$645	\$ _____
18. Plant Research	\$595	\$645	\$ _____
19. Integrating Your Biosafety Program into a Biorisk Management System	\$595	\$645	\$ _____
20. Enhancing Biosecurity and Biosecurity in Public Health Labs	\$350	\$400	\$ _____
21. Identification, Treatment, Research, and Containment of Neglected Parasitic Diseases	\$350	\$400	\$ _____
22. Value-driven Safety for Researchers	\$350	\$400	\$ _____
23. Commissioning for the Containment Lab	\$350	\$400	\$ _____
24. Best Practices in Teaching Technical Topics	\$350	\$400	\$ _____
25. Public Health Hazard Planning	\$350	\$400	\$ _____
26. How to Respond to Emergency Situations	\$350	\$400	\$ _____
27. Strategies to Customize and Streamline the IBC	\$350	\$400	\$ _____
28. Infectious Substance Shipping Refresher	\$350	\$400	\$ _____

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

Conference Cancellation Policy: Cancellations received before August 22, 2016—85% refund; cancellations received between August 22 - September 2, 2016—50% refund; cancellations received after September 2, 2016—no refund.

Share your biosafety resources!



AVAILABLE RESOURCES

GENERAL BIOSAFETY

Serves as a starting template for Biosafety Professionals

ANIMAL BIOSAFETY

Videos describing the procedures animal handlers should follow when working at ABSL-1, -2, or -3

BLOODBORNE PATHOGENS

Starting point for administrators creating a BBP Exposure Control Program

ABSA International Training Tools/Resources Committee

ABSA International's Training Tools/Resources Committee is soliciting submissions via the ABSA International website. Our goal is to provide tools, templates, and resources to those who provide training in biosafety or closely-related areas.

You may contribute by:

1. **Sending us resources you are willing to share here.** These can be placed on the public site for full access or on the members-only area for access only by ABSA members. Your content will be reviewed prior to posting.
2. **Letting us know what types of resources you might find useful.** The Training Tools/Resources Committee will gather suggestions and look into what resources are currently available as well as make recommendations for development of appropriate tools.
3. **Submitting feedback with the user evaluation form for each resource you use.**



ABSA INTERNATIONAL

Biosafety Buyer's Guide www.biosafetybuyersguide.org

ABSA International launched the Biosafety Buyer's Guide to connect supplier partners with members and biosafety professionals. The Guide features biosafety and biosecurity related companies, services, and consultants. The Biosafety Buyer's Guide offers biosafety professionals easy access to ABSA International's partners' products and services. The Guide offers Basic Listings (company contact information), Highlighted Listings (company contact information and logo), and Banner Ads. Listings and Banners are posted for 12 months.

The screenshot shows the homepage of the Biosafety Buyer's Guide. At the top, it says "Biosafety Buyer's Guide brought to you by the ABSA International". Below this is a navigation menu with categories: Architects, Biocontainment, Biosafety Cabinets, Biosafety Consultants, Certifiers, Engineers, Lab Equipment, Monitoring, Packaging and Shipping, Software, Sterilization, Training, and Veterinary. A "Featured Companies" section lists several companies with their logos, names, addresses, phone numbers, and websites. The companies listed are ABC-Actini, LLC; Arcoplast, Inc.; Baker; bioBUBBLE, Inc.; and Biosafety Biosecurity International. There are also vertical banners on the right side for "custom fit BENCHTOP TO ROOM" and "BIOCONTAINMENT". At the bottom, there is a "VISUAL AWElight" banner and contact information for ABSA International.

Categories

- Architects
- Biocontainment
- Biosafety Cabinets
- Biosafety Consultants
- Certifiers
- Engineers
- Lab Equipment
- Monitoring
- Packaging and Shipping
- Software
- Sterilization
- Training
- Veterinary
- Waste Management

To add your products or services to the Biosafety Buyer's Guide, contact Karen Savage at karen@absaoffice.org.
Download an application at http://biosafetybuyersguide.org/pdf/ABSA_BiosafetyBuyersGuideApplication.pdf.



ABSA INTERNATIONAL

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59th Annual Biological Safety Conference

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