

### LEARNING OBJECTIVES

- Delineate between regular institutional biosafety training and academic biosafety coursework and understand the need for integration of biosafety into academic curricula.
- Understand the Education & Curriculum Task Force (ECTF) goals, sub-committees, and current initiatives.
- Summarize the results of the ECTF survey of ABSA members.





### WHAT IS ACADEMIC BIOSAFETY?

- For-credit coursework in biological safety concepts and their application.
- Offered at undergraduate, graduate, or post-doctoral levels.
- Incorporated in existing academic courses or offered as stand-alone coursework.
- Coursework offered as part of a stand-alone certificate or degree program or as an adjunct to an existing program.
- This does not include regular biosafety training offered as part of an institution's general biosafety management program.
- Academic biosafety coursework content is independent of the specific elements of an institution's safety programs.

## THE NEED FOR ACADEMIC BIOSAFETY

- "Graduate training historically has been aimed almost exclusively at preparing people for academic research positions."
- "less than half of US-trained biomedical PhDs go on to a career in academia"
- "Given the changing face of the biomedically trained workforce, the working group believes that graduate programs must accommodate greater diversity in anticipated career outcomes for students."
- "Institutions also could be encouraged to develop other degree programs, such as master's degrees designed for specific science-oriented career outcomes, such as industry or public policy. These could be developed as stand-alone programs or provide sound exit pathways for PhD students who decide not to continue on the research career track."

BIOMEDICAL RESEARCH WORKFORCE WORKING GROUP REPORT

### THE NEED FOR ACADEMIC BIOSAFETY

- High demand for qualified biosafety professionals.
- There is currently no clear path for a career in biosafety. How many of us wanted to be biosafety professionals when we grew up?
- Rate of retirement of current biosafety professionals is quite high.



### THE NEED FOR ACADEMIC BIOSAFETY

- Could incorporation into the curriculum be a way to change attitudes to the incorporation of biosafety into lab culture?
- Could academic biosafety be a way to prevent teaching lab acquired infections?
- Could academic biosafety courses, certificates, or degree programs provide a front door to the biosafety profession to meet the continued and growing demand for qualified biosafety professionals?



### WHAT IS THE ECTF?

- Initiated by Pat Condreay as a focus for his tenure as ABSA President.
- Task Force efforts initiated by Paul Meechan and Brandy Nelson.
- First Initiative: Survey of ABSA members to determine the current state of academic biosafety.

### ECTF GOALS

 Develop a strategy and resources for academic institutions (and their biosafety professionals) to encourage and implement biosafety education at undergraduate, graduate, and post-doctoral levels.

### **ECTF GOALS**

 Develop training and education strategies and implementation methods for teaching labs to help prevent outbreaks which have become a fairly regular occurrence.

### ECTF GOALS

 Explore resources, information, and biosafety training materials that could facilitate a front door to the profession or a means to expand the knowledge base of the safety generalist into the field of biosafety.

# SUBCOMMITTEES OF THE ECTF

- Academic Biosafety
  - Develop tips and tricks for supporting academic integration and determine best method of distribution to biosafety professionals at academic institutions. Strategies for overcoming barriers to faculty inclusion for biosafety professionals.
  - Develop informational materials targeted to Deans, Chairs, etc. including information on the benefit of incorporating biosafety into existing undergraduate, graduate, and post-doctoral training programs (alternative science careers). Distribute to biosafety professionals for their use at their respective institutions.
  - Review existing academic biosafety curricula.

### SUBCOMMITTEES OF THE ECTF

- Outbreak Prevention: Targeted Training Approach
  - Explore ways to incorporate biosafety into curriculum as a means to prevent teaching lab acquired infections.

### SUBCOMMITTEES OF THE ECTF

- Front Door to the Profession To Be Developed
  - Develop a list of technical safety professional programs.
  - Determine best type of curriculum for this application.
  - Develop informational materials for existing professionals or current students on biosafety as a profession.

### PAST YEAR ACTIVITY SUMMARY OF THE ECTF

- Academic Biosafety Presentations
  - Southeastern Biological Safety Association (SEBSA) Meeting, May 2018, University of Tennessee Knoxville
  - Midwest Area Biosafety Network Symposium (MABioN), August 2018, Biosecurity Research Institute Manhattan
- ABSA Member Survey



### **ABSA MEMBER SURVEY**

- Disseminated in March 2018
- Designed to collect data on biosafety integration in academic curricula.
- Participants were asked to specifically exclude biosafety training that may be offered as part of the institution's general biosafety program.
- The survey collected data on:
  - Course offerings,
  - Course types,
  - Course delivery methods,
  - Development steps for biosafety integration efforts,
  - Successes and failures of initiatives.

# For-credit Biosafety Coursework ABSA Member Survey from Education & Curriculum Task Force

The Education & Curriculum Task Force has been convened to explore ways to promote the incorporation of biosafety education into the curriculum of academic institutions. To begin working on this task, utilizing a survey, we are interested in understanding the state of biosafety education at undergraduate, graduate, and post-doctoral levels. For the purposes of this survey we are interested only in for-credit biosafety coursework as opposed to biosafety training that may be offered as part of the institution's general biosafety program.

### ABSA Education & Ourriculum Task Force : For-credit Biosafety Coursework--ABSA Member Survey 1. ABSA Education & Ourriculum Task Force For-credit Biosafety Coursework--ABSA Member Survey The Education & Curriculum Task Force has been convened to explore ways to promote the incorporation of biosafety education into the curriculum of academic institutions. To begin working on this task, utilizing a survey, we are interested in undergraduate, and post-doctrail levels. For the purposes of the survey we are interested only in for-credit biosafety coursework, as opposed to biosafety training that may be offered as part of the initiation general biosafety program.

### **MEMBER SURVEY QUESTIONS** 1. Do you work in academia or have you contributed toward developing/teaching forcredit biosafety coursework in an academic setting? Yes a. No (end of survey) b. 2. Please provide the name of your institution to prevent duplicate reporting for data collection purposes. This information will not be shared without your permission. Does your institution currently offer any for-credit biosafety coursework? З. Yes a. b. No

### **MEMBER SURVEY QUESTIONS**

- 4. How would you describe the course offerings? Choose all that apply.
  - a. Stand-alone course
  - b. Sections, sessions, or lectures within existing coursework
  - c. Undergraduate
  - d. Graduate
  - e. Certificate or degree programs
  - f. Other (please describe)
- 5. How are your course offerings delivered? Choose all that apply.
  - a. Webinar
  - b. Online
  - c. Blended
  - d. Live
  - e. Other (please describe)

### **MEMBER SURVEY QUESTIONS**

- 6. The remaining questions will request more in-depth information regarding course offerings at your institution. Please provide your contact information if you would be willing to further discuss your institution's programs and/or share course materials.
- 7. Briefly describe the steps taken to put this coursework into place.
- 8. Would you consider the integration of biosafety education into the academic curriculum at your institution a success based upon course enrollment and/or other metrics?
  - a. Yes
  - b. No
- 9. If you answered "no" to question 7, what do you think could be done differently to make your program more successful?





### SURVEY RESULTS: Q5 HOW ARE YOUR COURSE OFFERINGS DELIVERED? CHOOSE ALL THAT APPLY. (REPORTED AS PERCENTAGE OF RESPONSES)







### THE NEXT SURVEY...

- Second Initiative of the ECTF: Survey of academic program administrators and leadership. Targeted to Provosts, Deans, Directors, and Chairs.
  - Attempt to determine what drives colleges and universities to initiate and support new coursework and programs.
  - Includes introductory material describing academic biosafety, the need for trained biosafety professionals, and the goals of the survey.
     Raise awareness of academic biosafety needs and
    - initiatives.

# SECOND SURVEY QUESTIONS 1. What, for your institution, drives the development of a new course, certificate, or degree program? (Check all that apply) a. Jobs for graduates completing the course/certificate/program. b. The course/certificate/program is novel or innovative. c. The course/certificate/program aligns with existing offerings at the institution. d. The course/certificate/program attracts resources: i. Students ii. Commercial support. t. Faculty interest in creating and sustaining the course the course/certificate/program.

### SECOND SURVEY QUESTIONS

- 2. At your institution, who is allowed to sponsor a course? (Check all that apply)
  - a. Institutional professional staff.
  - b. Institutional professional staff with adjunct faculty status.
  - c. Only regular faculty members.
- 3. At your institution, who is allowed to sponsor a certificate program? (Check all that apply)
  - a. Institutional professional staff.
  - b. Institutional professional staff with adjunct faculty status.
  - c. Only regular faculty members.
- 4. At your institution, who is allowed to sponsor a degree program? (Check all that apply)
  - a. Institutional professional staff.
  - b. Institutional professional staff with adjunct faculty status.
  - c. Only regular faculty members.

### SECOND SURVEY QUESTIONS

- 5. At your institution, can professional staff petition to become adjunct or regular faculty in addition to their professional staff duties?
  - a. Yes, but adjunct only and they must meet the requirements.
  - b. Yes, they may be allowed to be regular faculty, as accepted by an academic department.

c. No.

- 6. At your institution, how is a course approved to be taught as a regularly scheduled course?
- 7. At your institution, how is a certificate program approved to be issued by an academic department?
- 8. At your institution, how is a degree program approved to be issued by an academic department?

### PLANS FOR THE COMING YEAR

- Second survey distribution
  - Review data and utilize to drive future task force initiatives
- Addition of an additional task force leader
- Recruit additional ABSA members interested in contributing to our efforts
- Continue to present at affiliate meetings and promote academic biosafety

