

Adapting Biosafety and Biosecurity for the Age of Artificial Intelligence and Laboratory Automation

May 5–8, 2025

Portland, OR



Preconference Workshop, APHL 2025
May 5, 2025 • 8:00 am – 11:00 am PDT
Oregon Convention Center • Portland, OR

Course Number: **588-513-25**
Registration fee: **\$149 per person**
Register at: **www.aphl.org/AC**

DESCRIPTION

This workshop highlighting the evolution of biosafety and biosecurity issues related to emerging laboratory technologies is structured to be a dynamic and interactive session. Participants will engage in thought-provoking exercises designed to challenge their perspectives and stimulate deep reflection. Through interactive lectures, guided activities, group discussions, and creative thought exercises, attendees will explore modern biosafety risks and biosecurity threats, reflect on existing tools, and develop innovative solutions necessary to address current and emerging biosafety and biosecurity challenges.

The workshop will address:

- Biosecurity challenges posed by cybersecurity activities, including practical guidance for conducting a cybersecurity threat and vulnerability assessment in laboratories.
- Recent biosafety issues related to modern laboratory instrumentation, such as manufacturers' response to high consequence pathogen testing, and performing an instrument prepurchase risk assessment.
- The evolving needs of biosafety and cyberbiosecurity in response to trends in automation and artificial intelligence as laboratories implement modern technologies.

As public health laboratories adopt new technologies, biosafety and biosecurity programs must evolve to meet future needs. This workshop will jump-start attendees to consider the changing risks and threats that must be addressed to advance their biosafety and biosecurity programs into the future.

OBJECTIVES

At the end of the workshop, the participant will be able to:

- Conduct a threat and vulnerability assessment to address laboratory biosecurity challenges posed by cybersecurity activities
- Apply the use of the risk assessment in design and implementation of new instruments
- Identify biosafety and biosecurity risks related to automation and artificial intelligence technologies in laboratory settings

AUDIENCE

This workshop is for biosafety and biosecurity professionals, laboratory directors, laboratory supervisors, laboratory operations managers and information security professionals.

LEVEL OF INSTRUCTION

INTERMEDIATE: Refresher course; some basic knowledge is required; for the experienced staff technologist with some years of experience.

SPEAKERS

Stormy Chester, BS • Association of Public Health Laboratories (Moderator)

Drew C. Fayram, MS, CBSP(ABSA), RBP(ABSA) • Merrick & Company

Kelly Oakeson, PhD • Utah Department of Health

Michael A. Pentella, PhD, D(ABMM) • State Hygienic Laboratory at the University of Iowa

TOPICS AND EXERCISES

Emerging Biosecurity Challenges • Drew Fayram

Modern Biosafety Challenges • Michael Pentella

Trends in Automation and Artificial Intelligence • Kelly Oakeson

Review of Resources and Participant Feedback • Drew Fayram, Michael Pentella and Kelly Oakeson

CONTINUING EDUCATION CREDIT

The Association of Public Health Laboratories (APHL) is approved as a provider of continuing education programs in the clinical laboratory sciences by the ASCLS P.A.C.E.[®] Program. P.A.C.E.[®] is accepted by all licensure states except Florida. This learning activity will provide 3.0 contact hours for the participant who successfully completes this training.