

APHL 2024 Annual Conference P.A.C.E. Credits

Continuing Education Credits

APHL is an approved provider of continuing education programs in the clinical laboratory sciences through the American Society of Clinical Laboratory Science (ASCLS) P.A.C.E.® program. Attendees have the opportunity to earn up to 14 contact hours by attending all available sessions.

Session Topics []

This year APHL solicited session proposals from its standing committees and the general membership, which resulted in many excellent proposals. To assist you in determining the general area of interest, we have given each session a letter symbol which corresponds with the topic that it represents. This guide is listed below.

AVE	Agricultural, veterinary and environmental testing technologies and practices
BIOM	Biomonitoring and chemical threats
BIOS	Biosafety and biosecurity
COM	Communications, advocacy and public relations
COV	COVID-19 and other infectious diseases (STI/STD)
DAT	Data and analytics
DDT	Diagnostics and new detection technologies
FSS	Food safety and security
NGS	Next generation/long-read sequencing, metagenomics and bioinformatics
NBS	Newborn screening and genetics
OHA	One Health! approaches
PAN	Pandemic preparedness and emergency response
PAR	Partnerships, academic and research collaborations, training and outreach
QLM	Quality laboratory management systems
SEI	Socio-economic issues
SLS	Strengthening laboratory systems and strategic planning
SUR	Surveillance, outbreaks and emerging infections
WSU	Wastewater surveillance
WDT	Workforce development and retention

Competencies { }

The Centers for Disease Control and Prevention (CDC) and the Association of Public Health Laboratories (APHL) published *Competency Guidelines for Public Health Laboratory Professionals* in a Morbidity and Mortality Weekly Report (MMWR) supplement. These competency guidelines were developed with a focus on public health laboratory (PHL) practice and are intended to form the foundation of competency-based approaches to strengthen that practice, including integration into workforce development initiatives such as training and education programs.

In support of efforts to further the adoption and implementation of Guidelines, each session in the APHL 2024 Annual Conference program will include one or more symbols corresponding to the related competency domain(s) that the session addresses. This guide is listed below.

QMS	Quality management systems
ETH	Ethics
MLD	Management and leadership
COM	Communication
SEC	Security
EMR	Emergency management and response
WFT	Workforce training
GEN	General laboratory practices
SHC	Safety subdomain
SRV	Surveillance
INF	Informatics
MCB	Microbiology
CHM	Chemistry
BIO	Bioinformatics
RES	Research

Schedule

Sunday, May 5

9:00 am – 5:00 pm

Pre-Conference Workshops

- Laboratory Design Matters: Improving Biosafety and Biosecurity Through Efficient Facility Design, Maintenance and Risk Assessment Practices (Part 1) {MLD, QMS} [QLM, SLS]

588-846-24 – 9.5 contract hours for this session

This interactive workshop will help participants improve biosafety and biosecurity, including Biosafety Level 3 (BSL-3), through efficient facility design, maintenance and risk assessment practices. Attendees will participate in interactive sessions to illustrate best practices concepts found in the [Laboratory Facility Construction and Major Renovation Guidelines](#). Discussions and hands-on interaction will cover parts 1–10 of the Guidelines. Participants are required to bring their own laptop in order to optimize participation during interactive sessions; internet will be available in the workshop room. A more detailed agenda will be provided to participants. Registration is for both days of the workshop.

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

- Explain the use and applications of the APHL Laboratory Facility Construction and Major Renovation Guidelines
- Describe how to perform a thorough laboratory assessment to determine issues, needs, deficiencies or problems that need to be addressed
- Describe how to assemble and synthesize pre-design information appropriate to the development of a laboratory facility, including risk assessment
- Describe the BSL-3 renovation and construction design principles
- Review the overall steps required for renovation or new laboratory construction projects using the Laboratory Design Checklist

- Making a Difference: A Workshop for Prospective APHL Global Health Consultants

588-847-24 – 6.5 contract hours for this session

Are you interested in supporting public health laboratories across the globe? This interactive workshop provides an overview of the APHL Global Health (GH) Program and GH consultancy opportunities. We'll describe APHL's expectations for consultants working internationally and review consultants' roles and responsibilities. You'll hear stories from the field and participate in exercises on cultural sensitivity, diplomacy, and travel safety. Discover how consulting can make a difference, not only for the country but for you and your laboratory. Note: workshop attendance does not guarantee immediate consulting opportunities but includes you in a pool of consultants to be engaged as needed and not all consulting opportunities involve travel.

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

- Describe the roles and responsibilities of a Global Health consultant.
- Describe APHL's expectations for consultants working internationally.
- Explain the Global Health Program's consultancy opportunities.
- Demonstrate cultural awareness and diplomacy skills.
- Apply for Global Health consultant opportunities.

Monday, May 6

8:00 am – 11:30 am

Pre-Conference Workshops

- Laboratory Design Matters: Improving Biosafety and Biosecurity Through Efficient Facility Design, Maintenance and Risk Assessment Practices (Part 2) {MLD, QMS} [QLM, SLS]

- Nonverbal Essentials for Success: Helpful Strategies for Scientific and Technical Communicators {COM, MLD, WFT} [COM, WDT, SLS]

588-850-24 – 3.0 contract hours for this session

This workshop will remind participants of the importance of applying professional nonverbal communication in the public safety realm. Participants will learn through mini-lecture presentations combined with experiential learning. This learning will include discussions, scenarios, and other activities to promote the application of concepts and help participants set concrete goals for future interactions.

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

- Recognize the importance of applying professional nonverbal communication in the public health laboratory community
- Engage in reflective and analytical activities to develop awareness and begin goal-setting
- Practice application of effective nonverbal communication behaviors with other professionals

- Communication Essentials: An Experiential Workshop on Messaging to Meet Your Laboratory's Needs {COM, MLD, WFT} [COM, WDT, SLS]

588-848-24 – 3.0 contract hours for this session

The ability to effectively communicate a message that leaves a lasting impact is an important skill for laboratorians. They need to be able to share their message and gain buy-in for their vision, whether that's for onboarding a new assay, implementing information technology changes, or securing state funding for programmatic or infrastructure updates. This workshop will teach attendees how to craft messaging that creates an emotional response, which is the most impactful type of communication, as well as how to develop a core message and navigate successfully delivering it when the information receiver may have their own agenda. Attendees will learn through presentations and exercises.

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

- Advocate for their laboratory by effectively communicating the value of your work
- Develop rapport with external partners
- Confidently develop and share core messages

- Strategies and Model Practices for Hiring and Retaining the Best PHL Workforce Talent {QMS, MLD, WFT} [COM, WDT, SLS]

588-849-24 – 3.0 contract hours for this session

Hiring and maintaining top talent is a challenge public health laboratories face. From posting the position to ensuring the candidate adds to the vision of the laboratory, this workshop will provide tips and tools for posting job positions, interviewing applicants, and selecting the most qualified applicant. Model practices for employee retention will be covered. Tools for developing and providing onboarding of employees will be discussed followed by ideas for retention in this competitive job market. Activities include reviewing job posting examples; development of interview questions with role-play practice; sharing of onboarding tools; and an introduction to the value of periodic stay interviews.

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

- Prepare job postings designed to reach qualified and diverse applicant pools
- Develop strategies to manage interviews to elicit insightful responses from applicants
- Describe examples of on-boarding practices that provide professional first impressions for new staff
- Discuss the advantages for defining professional development strategies for staff
- Identify the elements of “stay interviews”

2:00 pm – 3:00 pm

Plenary Session - Opening Session

- AI-Powered Public Health: How Labs Can Prepare for the Road Ahead {INF, MLD, GEN} [DAT, QLM, SLS]

588-800-24 – 1.0 contract hour for this session

Artificial Intelligence (AI) has been advancing rapidly, and Generative AI, in particular, holds immense potential for public health laboratories. This session will delve into how AI technologies, including

machine learning, natural language processing, and generative models, are shaping the future of public health.

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

- Describe the Artificial Intelligence (AI) and its various applications in the context of public health laboratories
- Discuss how AI differs from traditional data analysis methods
- Explain the ethical and regulatory considerations specific to AI adoption in public health, including data privacy, security, and compliance with existing healthcare regulations
- Engage in the ongoing dialogue surrounding AI's role in public health

4:00 pm – 5:00 pm

Concurrent Sessions

- Next Generation Sequencing Solutions for Healthcare-associated Infections and Antimicrobial Resistance {GEN, MCB, INF} [NGS, SUR, DDT, DAT]

588-801-24 – 1.0 contract hour for this session

This session aims to communicate how NGS technologies are being utilized in public health labs to address HAI/AR threats and highlight cutting-edge approaches for analysis and integration of NGS data for public health action.

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

- Describe novel applications of NGS technologies for addressing pressing HAI/AR threats
- Identify current challenges and potential solutions for routine integration of NGS data into HAI/AR public health activities
- Demonstrate approaches to communicate NGS and bioinformatic results to non-sequencing experts involved in HAI/AR work

- Hunting for a Needle in a Stack of Needles – Non-targeted Analysis across Public Health Laboratories {GEN, MCB, INF} [NGS, SUR, DDT, DAT]

588-802-24 – 1.0 contract hour for this session

This session will compare different forms of non-targeted testing across public health laboratories, including high-resolution mass spectrometry (HRMS) in environmental and clinical testing and Next Generation Sequencing (NGS) in infectious diseases, including a project looking at threat-agnostic sequencing in preparedness and response. Individual approaches to how data from each of these different non-targeted testing technologies is handled, analyzed, managed and used will be discussed, as well as how the data generated from non-targeted testing methods is or can be validated and shared across laboratories or networks.

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

- Compare the varying forms of non-targeted testing approaches across PHL subject areas and their associated data and informatics challenges and opportunities
- Identify examples of scenarios in which non-targeted testing technology can be used in an emergency response scenario
- Propose opportunities to enhance a unified response in emergency response plans

- Get the Lead Out! Public Health, Laboratory and Medical Initiatives to Identify and Reduce Pediatric Lead Exposure {GEN, CHM} [NBS, DDT]

588-803-24 – 1.0 contract hour for this session

This session will provide insights into the current landscape of pediatric lead testing, public health initiatives to reduce exposures, laboratory challenges, and state of the science for clinical case management.

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

- Describe the breadth of pediatric lead poisoning prevention activities nationally and at the state and local levels
- Identify steps laboratorians can improve the quality of pediatric blood lead test results
- Explain current public health and medical interventions designed to reduce exposure and manage pediatric lead poisoning cases

- When It Absolutely, Positively Has to Meet Specifications: The North Carolina Model for Pre-Analytical Systems Compliance {GEN, QMS, INF} [QLM, PAR, DDT, DAT]

588-804-24 – 1.0 contract hour for this session

During this session, three subject matter experts will present a model program for pre-analytical system performance. The presentations will discuss the North Carolina State Laboratory of Public Health's response to a regulatory audit that revealed opportunities for quality improvements that necessitated the establishment of a system to ensure clinical specimen quality from collection to receipt in the laboratory; that met regulatory requirements. Topics reviewed by the speakers will include 1) collection of critical data elements, use of Electronic Test Orders and Results (ETOR), monitoring time and temperature for specimen transport, and developing standard operating procedures and training materials; 2) educational and outreach activities, communication with specimen submitters, and development of infographics; and 3) Continuous Quality Improvements (CQI) efforts to assure regulatory compliance.

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

- Describe various quality monitors for pre-analytical processes
- Discuss the essential components of a quality focused, regulatory-compliant pre-analytical system
- Design strategies to ensure that test-specific specimen requirements are met during clinical specimen transport from collection sites to the testing laboratory

- Preventing the Next Infant Formula Crisis: Public Health Actions to Control *Cronobacter* (RS) {MCB, INF} [FSS, SUR, DDT]

588-805-24 – 1.0 contract hour for this session

Attendees will learn about the implications of CSTE's position statement on invasive *Cronobacter* species in infants, APHL and CSTE efforts to support diagnosis, characterization, investigation, reporting and control of infant *Cronobacter*, and aspects of FDA's *Cronobacter* Prevention Strategy that will enhance the safety of powdered infant formula, including remedies to supply chain shortages that arise when vulnerable populations lose a key source of their nutrition.

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

- Discuss the importance of *Cronobacter* as a life-threatening pathogen in vulnerable populations and list the major components of FDA's *Cronobacter* Prevention Strategy
- Describe efforts by APHL, CSTE, CDC and FDA to support *Cronobacter* diagnosis, characterization, surveillance, investigation, and control
- Consider appropriate reportable condition changes in their jurisdiction to align with the CSTE position statement

Tuesday, May 7

9:00 am – 10:00 am

Plenary Session

- How Public Health Actions Are Fueled by Regulatory Science (RS) {EMR, MLD, SRV} [FSS, SUR, OHA]

588-806-24 – 1.0 contract hour for this session

This fireside chat is an opportunity to gain insights into the indispensable functions of laboratories in the areas of environmental protection, water quality, and food testing. Attendees will explore the pivotal role of regulatory science in safeguarding public health and promoting compliance with essential regulations and hear from a consolidated state laboratory that produces data serving both regulatory and non-regulatory purposes.

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

- Describe regulatory science as seen by FDA partners
- Discuss the intersection between regulatory science and environmental protection
- Describe unique considerations when generating regulatory data for public health action

10:30 am – 11:30 am

Plenary Session – Dr. Katherine Kelley Distinguished Lecture {MLD, COM } [COM, DAT, SLS]

588-807-24 – 1.0 contract hour for this session

The Deadly Rise of Anti-Science

Dr. Peter J. Hotez, a Nobel Peace Prize nominated physician and scientist, is one of the most trusted voices on the pandemic and who also became one of the main targets of anti-science rhetoric that gained traction through conservative news media. Dr. Hotez will share his story of how the anti-vaccine movement grew into a dangerous and prominent anti-science element in American politics and will describe the devastating impacts it has had on Americans' health and lives. As a scientist who has endured antagonism from anti-vaxxers and been at the forefront of both essential scientific discovery and advocacy, he explains how anti-science became a major societal and lethal force.

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

- Define anti-science
- Discuss the impact of anti-science movement on the US population
- Identify anti-science elements in the US that are pushing back on science to enhance their own agenda

1:00 pm – 2:00 pm
Concurrent Sessions

- Using the Past to Prevent Future Laboratory-acquired Infections {EMR, QMS } [COM, DAT, SLS]
588-808-24 – 1.0 contract hour for this session

This breakout session will demonstrate how to use real-life scenarios from the American Biological Safety Association International (ABSA) Laboratory-Acquired Infections Database (LAI DB) as a learning and training tool to help prevent laboratory-acquired infections, exposures, and biosafety (BS) incidents to both known and emerging (emer.) pathogens (path.). Participants will be shown how to use the Association of Public Health Laboratories (APHL) “Exposure Assessment and Symptom Monitoring Guide” (EA Guide). Presenters will also discuss the importance of performing a root cause analysis (RCA) after a laboratory incident, or near miss, to help revise the risk assessment (RA), identify biosafety plan gaps, and determine additional mitigation measures to reduce risk and improve laboratory biosafety.

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

- Describe how the ABSA LAI database can be used for biosafety training and determining how to safely work with emerging pathogens
- Explain how the APHL exposure assessment tool can be utilized to assess real-life laboratory incidents for potential exposures and to help guide prophylaxis if indicated
- Discuss the value of performing a root cause analysis

- Wastewater Surveillance at Long-term Care Facilities: Perspectives on Feasibility and Antimicrobial-
588-809-24 – 1.0 contract hour for this session

Perspectives from U.S. wastewater surveillance efforts at long-term care facilities (LTCFs) regarding feasibility and antimicrobial-resistant (AR) target detection will be shared. An open forum will be encouraged to ask questions, obtain feedback, and discuss topics associated with the potential expansion of wastewater surveillance at LTCFs with conference attendees.

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

- Describe the factors to consider before implementing wastewater surveillance at a LTCF
- List sample collection and concentration methods, AR targets and detection methods, to prepare a potential wastewater surveillance workflow
- Communicate with public health stakeholders interested in conducting wastewater surveillance at LTCFs

- Mercury? It’s not ELEMENTary at All, My Dear {CHM, SRV} [FSS, SUR, AVE]
588-810-24 – 1.0 contract hour for this session

It’s time we all pay more attention to mercury. Mercury is a harmful legacy contaminant that is commonly found in fish, seafood, and consumer products. This session describes the health risks associated with mercury exposure, the surprisingly high prevalence of mercury around the country, what efforts are being done by state departments of health to address exposures, the current gaps in responses, and why the field of public health cannot afford to ignore these issues any longer.

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

- Explain why mercury exposure is of public health concern
- List steps public health laboratories can implement immediately to help address exposures
- Identify systemic obstacles to overcome to launch a harmonized public health response

- Implementing and Sustaining Parasitic Disease Testing {MCB, SRV} [AVE, SUR, OHA]

588-811-24 – 1.0 contract hour for this session

This session will provide information on resources needed to conduct parasitic disease testing for both clinical diagnosis and surveillance activities. The session will also cover overcoming potential challenges associated with implementing parasitic disease testing.

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

- Identify resources needed to implement parasitic diseases testing
- Describe domestic surveillance programs involving laboratory analysis of parasitic diseases
- Describe approaches to parasitic disease test validation

- Charting the Future: Leveraging National Competency Standards in a Cutting-Edge Regulatory and Laboratory Training System (RS) {EMR, MLD} [FSS, PAR, SLS]

588-812-24 – 1.0 contract hour for this session

FDA's 5-year strategic plan focuses on the development of a National Regulatory and Laboratory Training System (RLTS) that supports the goals of an integrated food safety system (IFSS). Grounded on a set of validated competencies housed in a National Competency Standard (NCS), the RLTS will revolutionize human and animal food regulatory training conducted by FDA and IFSS partners.

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

- Describe the new FDA Regulatory and Laboratory Training System (RLTS)
- Explain the Laboratory National Competency Standard (NCS)
- List the potential practical applications of the Laboratory National Competency Standard (NCS)

3:00 pm – 4:00 pm

Concurrent Sessions

- Revolutionizing Enteric Surveillance: The Role of HMAS in Easing the Burden of Pathogen Isolation {MCB, SRV} [DDT, SUR, NGS]

588-813-24 – 1.0 contract hour for this session

The rapid development and implementation of culture independent diagnostic tests (CIDTs) continues to threaten public health surveillance of enteric pathogens. The burden and cost of isolating and identifying bacterial isolates from CIDT specimens has largely fallen to public health laboratories in recent years. The uptake of CIDTs will eventually outpace PHL resources effectively ending public health's ability to track enteric illness trends and detect and respond to outbreaks. It will be critical to pivot to culture-independent next-generation sequencing methods to continue to support enteric disease surveillance and outbreak detection.

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

- Describe some of the successes and challenges CDC and PHL pilot sites have encountered to date
- List some key learnings and tips for how the participant's jurisdiction can get involved in the pilot

- The Radiochemistry Workforce – No Longer Decaying {CHM, MCB, SHC} [FSS, AVE, DDT]

588-814-24 – 1.0 contract hour for this session

This session will provide the audience with information about activities underway to alleviate the shortage of trained radiochemists; It will describe the radiochemistry workforce training program sponsored by APHL that will provide a comprehensive training program to ensure that there will be adequate laboratory capacity. It will also describe the activities FDA has taken under the LFFM to ensure the safety of the nation's food supply, and information on recent activities at CDC on the LRN-R.

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

- Describe the APHL-sponsored training program and how it will develop the radioanalytical workforce
- Discuss FDA activities that will help protect the nation's food supply and develop radioanalytical capacity
- Explain CDC's activities to increase laboratory capacity to test for human radiological exposure after a radiological event

- Enabling Public Health Electronic Test Ordering and Resulting through Intermediaries {INF, MLD, GEN} [DAT, INF, SLS]

588-815-24 – 1.0 contract hour for this session

The nation depends on public health laboratories (PHLs) to conduct critical and complex tests to keep our country safe from emergent threats, environmental contaminants, and food-borne illnesses. And yet, in 2023, laboratories are still grappling with manual, paper-based, and outdated processes that slow the exchange of vital information between the laboratory and its partners. While recognizing the benefits of enhancing electronic messaging capabilities, laboratories too often do not have the workforce, resources, or infrastructure needed to do so.

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

- Cite the current challenges with implementing ETOR across public health
- Apply lessons learned from the initial ETOR intermediary implementations to consider what intermediary onboarding and adoption might look like in their individual laboratory environments
- Strategize future data exchange solutions and consider potential partners

- The Changing Environment of Laboratory-based Antimicrobial Resistance Surveillance Reporting – Looking Domestically and Globally for Solutions {INF, SRV} [SLS, DAT, INF, BIOM]

588-816-24 – 1.0 contract hour for this session

This session details data mapping and routing of one-to-one connections between laboratory information systems and AMR surveillance systems, the burden on the laboratory to build and maintain these connections, and solutions to centralize data.

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

- Describe the AMR data flow from laboratories to surveillance and clinical systems
- Compare different AMR data exchange solutions through a decision tree
- Discuss the future of using Next Generation Sequencing to identify AMR organisms and the importance of data management

- Conundrums for Laboratorians: Regulatory and Ethical Considerations for Secondary Uses of Identifiable Biospecimens (RS) {ETH, GEN, MLD} [PAR, SLS, BIOM]

588-817-24 – 1.0 contract hour for this session

This session will help laboratorians learn responsible uses of previously collected biospecimens where no informed consent was obtained from the individual when planning and conducting scientific activities that may benefit from secondary use. After the session, they should be familiar with the regulations that establish parameters for secondary use when consent is not provided and have an awareness of other ethical matters to consider for scientific integrity. scientific integrity.

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

- Explain federal regulations related to the protection of human subjects that may apply to secondary uses of biospecimens with attention to consent requirements
- Identify situations when there are both regulatory and ethical implications to address for secondary uses of biospecimens
- Discuss how to apply ethical principles when planning and engaging in scientific activities that involve secondary uses of biospecimens

4:30 pm – 5:30 pm

Concurrent Sessions

- The Long and Winding Road - Transitioning from AR WGS Surveillance to Clinical Reporting {MCB, MLD, SRV} [NGS, BIOM, PAR]

588-818-24 – 1.0 contract hour for this session

Many labs are considering the importance and the clinical reporting of antimicrobial resistance (AR) gene variants, bacteria species identification or multilocus sequence types (MLST). When considering clinical reporting, it is important for the lab to consider the regulatory framework (CAP, CLIA, etc) in which their lab is certified as there can be nuances between them.

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

- Describe background to the use of WGS in the AR Laboratory Network and summarize the utilization, success stories, and impact of AR WGS
- Explain the steps needed for clinical validation of a WGS assay and regulatory considerations within different regulatory frameworks
- Discuss approaches in three laboratories for the utilization of a clinical AR WGS assays including reporting, interpretation, databases and disclaimers

- Rabies: Ancient Disease and Modern Problem {MCB, GEN} [DDT, AVE, SUR]

588-819-24 – 1.0 contract hour for this session

Public Health Laboratories serve as the main resource for rabies detection testing. This session will review current issues regarding rabies testing.

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

- Explain new technologies for rabies virus detection
- Determine resolutions for supply chain issues
- Describe the vaccine requirements for rabies laboratory staff

- The Evolving Role of Non-targeted Analysis: Advances and Perspectives {MLD, GEN, CHM} [FSS, PAR, SLS]

588-820-24 – 1.0 contract hour for this session

Recent advances in analytical technologies (such as high-resolution mass spectrometry) have enabled the development of emerging workflows for non-targeted analysis (NTA) in a number of important application areas. This session will focus on presenting current efforts in federal government laboratories (NIST, FDA, EPA, and CDC) to incorporate NTA methods for the enhanced screening of samples to identify and monitor new target analytes in a proactive manner.

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

- Assess the advantages of non-targeted analysis (NTA) for sample analysis in their laboratory
- Identify challenges and solutions for the implementation of NTA in their laboratory
- Discuss the variety of NTA method development efforts at key government agencies

- (Not So) Odd Couples: The Power of Collaboration for Rapid Response to Emerging Threats {MLD, COM} [PAR, COV, COM]

588-821-24 – 1.0 contract hour for this session

New partnerships between public health laboratories, academic laboratories, clinical laboratories, service labs and vendors drove innovation in laboratory testing and helped scale response during the COVID-19 pandemic. In this case study-based panel discussion, laboratory leaders will share details of their successful collaborations with partners outside of the APHL membership, the challenges they have experienced and their determinants of success.

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

- List examples of how collaborations can serve as opportunities for strengthening laboratory systems
- Describe the determinants of successful collaboration between state and local health public health laboratories, academic and clinical centers and the private sector as related to the development and implementation of new test methods
- Discuss some common challenges in multisectoral collaboration and potential mitigations

- Food Fraud: What You Don't Know Can Kill You! (RS) {GEN, MLD, SRV} [FSS, PAR, AVE, OHA]

588-822-24 – 1.0 contract hour for this session

Food fraud is the deliberate substitution of foods with something they are not for economic gain, but situations turn deadly when the substitute is poisonous. This session will describe the clinical discovery of mislabeled 'diet nuts' through a tragic lethal case in Minnesota, a public health food fraud investigation in Maryland that established the product's true identity and exposed dangerous blind spots in laboratory methods, and the successes and challenges of the widespread regulatory action FDA is taking to prevent further poisonings.

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

- Define food fraud and describe some notable cases, such as yellow oleander seeds
- Explain how public health laboratories investigate unknown foods for chemical threats
- Discuss how FDA uses clinical and scientific data to take regulatory action using this case study
- Describe the types of regulatory actions FDA can use to keep residents safe

Wednesday, May 8

7:30 am – 8:30 am

Roundtable Sessions

- Biosecurity Mastery: Navigating Critical Scenarios through Exercises {WFT, SEC, EMR} [BIOS, SLS, WDT]

588-823-24 – 1.0 contract hour for this session

Explore the Association of Public Health Laboratories (APHL) newly developed biosecurity toolkit, designed to enhance biosecurity measures in laboratories. Participate in a tabletop exercise using the toolkit scenarios, contribute your insights and engage in discussions on ongoing biosecurity efforts to collaboratively shape the future of laboratory biosecurity practices. Join this interactive session to foster knowledge exchange and strengthen your ability to identify and mitigate potential biosecurity risks.

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

- Strengthen their laboratory's existing biosecurity protocols or establish new ones
- Identify and mitigate potential biosecurity risks
- Establish their laboratory's biosecurity readiness

- The Impact of Bias in the Hiring Process {WFT, MLD, ETH} [SEI, WDT]

588-824-24 – 1.0 contract hour for this session

This session will begin with a brief, voluntary, interactive activity to uncover personal bias that might influence hiring decisions. The panel will openly discuss how affinity bias can influence judgement and will suggest strategies to avoid a candidate selection that aligns with personal preference instead of the criteria of the job.

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

- Describe the ways bias may show up in the workplace

- Discuss the ways that bias in the workplace can impact the communities we serve
- Apply strategies to address bias in the workplace

- Know Before They Go! Field Experience Using the Knowledge Retention Toolkit {WFT, MLD, QMS} [SLS, WDT]

588-825-24 – 1.0 contract hour for this session

With the rapid turnover of the workforce, sustaining organizational knowledge is even more critical to avoid loss of productivity, errors and rework in day-to-day operations as well as develop subject matter expertise. During this session, presenters will share their experiences on how they used the APHL Knowledge Retention Toolkit to support retention of knowledge, career progression, and succession planning. New tool features will also be covered.

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

- Describe examples of how to implement the knowledge retention toolkit in their organization
- Discuss common questions to capture the knowledge of at-risk populations
- List the basic components of the knowledge retention toolkit

- It's Getting Hot in Here: Addressing Temperature and Other Test-specific Requirements {GEN, QMS} [BIOS, DDR, QLM]

588-826-24 – 1.0 contract hour for this session

Through case studies and expert insights, this session will highlight implementation strategies that meet the complex regulatory compliance of monitoring sample, equipment, and laboratory environment, such as temperature and humidity.

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

- Outline different regulations and requirements surrounding temperature and humidity monitoring
- List successful strategies used to meet regulatory requirements based on recent audit findings

- Effective Communication for Aspiring Laboratory Leaders {WFT, COM} [COM, SLS, WDT]

588-827-24 – 1.0 contract hour for this session

This session will focus on the Leadership Development Toolkit created by Cohort 17 of the Association of Public Health Laboratories (APHL) Emerging Leader Program (ELP), describing how effective communication skills can assist in empowering laboratorians to transition into the next generation of public health leaders.

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

- Identify communication challenges in laboratory settings that can be mitigated or addressed with specific communication strategies
- Determine strategies for technical team members to effectively convey their thoughts and ideas to create desired change within their organization
- Apply communication strategies developed by peers and experienced leaders to improve individual and group laboratory work environments

11:00 am – 12:00 pm

Concurrent Sessions

- Advancing Laboratory Testing for Overdose Surveillance: Implementation of the Overdose Biosurveillance Strategy {CHM, SRV} [BIOS, SLS, PAR]

588-828-24 – 1.0 contract hour for this session

In this session, we will provide an overview of the drug overdose crisis in the United States, focusing on the substances driving the trends observed, introduce the work of the Overdose Biosurveillance Task Force and the new biosurveillance strategy for polysubstance use, and describe how the new strategy can be implemented by public health laboratory partners.

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

- Describe the problem of drug overdose in the United States
- Identify ways laboratory data can be utilized for surveillance
- Explain how to implement laboratory surveillance

- Trials and Tribulations: Packaging and Shipping High-Consequence and Emerging Threats {GEN, SEC, EMR} [BIOS, SLS, PAN]

588-829-24 – 1.0 contract hour for this session

Strict adherence to guidelines for the proper handling, processing, and packaging and shipping is paramount to ensuring that sample integrity as well as the safety of laboratory personnel and the public are not compromised. During this session, speakers will describe the vital role that laboratories fulfill in protecting the public's health through safe handling and transportation of high-consequence and emerging pathogens, such as select agents and toxins, shipping challenges during responses, best practices for regulatory compliance and conducting continuous training, and highlight valuable tools and resources for packaging and shipping emerging threats.

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

- Discuss regulatory requirements for the handling, packaging and shipping of high-consequence pathogens, such as select agents and toxins
- Describe how laboratories collaborate with jurisdictional partners for shipping and transport of emerging threats
- Share resources and implementation practices for continuous staff training in packaging and shipping threat agents

- Use of Environmental Microbiology Data in Outbreak Response – Visions, Stories and Resources {MCB, SEC, EMR} [BIOS, SLS, WDT, DAT]

588-830-24 – 1.0 contract hour for this session

From preparedness to identification of causal microorganisms, infectious microbial disease outbreaks associated with environmental systems present unique challenges to jurisdictions. In this session, we will explore state responses to past microbial disease outbreaks caused by *Naegleria fowleri*, *Campylobacter* and *Legionella*. We will also discuss federal and APHL resources and strategies for the use of environmental microbiology data to support water-related outbreak response and preparedness.

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

- Explain the need for preparedness and response planning for use of environmental microbiology data in an outbreak response
- List the federal and APHL resources available to assist with environmental investigations associated with outbreak response
- Describe the process for outbreak response from the perspective of different jurisdictions

- Hot Topics in Syphilis and Gonorrhea Testing {MCB, GEN} [DDT, SUR]

588-831-24 – 1.0 contract hour for this session

This educational session will cover relevant topics in laboratory testing for Syphilis and Gonorrhea in public health laboratories (PHL). Speakers will describe how their laboratories overcome diagnostic testing and workflow challenges that include: lack of routine tests for the direct detection of *Treponema pallidum*, the causative agent of syphilis; cumbersome syphilis testing algorithms that rely upon manual tests and that can be difficult to interpret in certain individuals; and the emergence of drug resistance in the fastidious organism *Neisseria gonorrhoeae* necessitating a strong surveillance response.

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

- Review unusual clinical cases of syphilis and determine the best test methodologies for diagnosis and surveillance
- Demonstrate effective strategies for implementation of clinically reportable antimicrobial resistance detection in *Neisseria gonorrhoeae*
- Describe the benefits and challenges associated with implementation of automated RPR for syphilis diagnostic testing

- Contamination Chronicles: Unmasking the Unusual in Public Health Investigations (RS) {MCB, CHM, SRV} [AVE, DDT, FSS, PAR]

588-832-24 – 1.0 contract hour for this session

Public Health Laboratories are often involved in outbreak investigations due to microbial or chemical contamination. In some cases, the investigation concerns reoccurring products or contaminants but in others, the contamination is in unique products and/or from intriguing sources. In this session, unusual and odd investigations will be presented. The speakers will relay the story of peculiar contaminations and resulting public health implications. In some cases, the investigations were multi-jurisdictional, including state and federal regulatory programs. Stories could include an *E. coli* O157:H7 outbreak linked to the use of a backyard slip and slide, an *L. mono* outbreak linked to “chicken” ice cream, and suspected poisoning linked to several household products.

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

- List regulatory programs that are part of the public health system
- Describe how multiple agencies interacted during outbreak investigations
- Identify different agencies and their rolls in outbreak investigations

1:30 pm – 2:30 pm

Plenary Session

- Wastewater Surveillance for Public Health: Rising to the Challenge {CHM, RES, EMR} [WSU, COV, DDT]

588-833-24 – 1.0 contract hour for this session

The session will provide an overarching view of wastewater surveillance, including a high-level overview of its status, challenges, and its potential growth for public health action. The session will also focus on case studies and success stories from various laboratories, demonstrating successful implementation of wastewater testing in different contexts, with a special emphasis on technology, data interpretation, and epidemiological relevance.

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

- Evaluate the current state and future directions of the National Wastewater Surveillance System
- Summarize how wastewater surveillance data is currently successfully being used for public health actions
- Discuss how to leverage current wastewater surveillance technologies to implement wastewater testing for other pathogens of public health concern

3:30 pm – 4:30 pm

Concurrent Sessions

- Weird Science: Solving Public Health Puzzles {MCB, SRV, EMR} [BIOS, SUR, OHA]

588-834-24 – 1.0 contract hour for this session

The public health laboratory is often the laboratory of last resort for diagnosis of unusual cases, detection of emerging infectious diseases and outbreaks. In the ID Committee's 7th year coordinating this popular quiz-based session, we are changing up the format to allow more audience participation! Instead of a panel of experts, our hosts will present a series of unusual public health cases and we will challenge the audience to answer the questions through an interactive format. Cases will be collated and presented by two cohosts, who will ensure appropriate content and delivery. Will the audience be able to solve the public health laboratories' most challenging infectious disease puzzles?

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

- Discuss strategies in the public health laboratory to build the capability and capacity to respond to unusual and/or emerging infectious diseases
- Describe unusual and challenging cases related to emerging infectious diseases and outbreaks of public health importance

- PFAS by the Numbers: A Story of 6, 29, and 12,034 {CHM, GEN} [AVE, DDT, OHA, PAR]

588-835-24 – 1.0 contract hour for this session

Per- and polyfluoroalkyl substances (PFAS) are a group of >10,000 synthetic, 'surface-acting' chemicals that have widespread commercial uses, but also persist for years in the environment and confer a myriad of detrimental health effects. This session will detail how EPA and States are collaborating to

regulate 6 PFAS, defining the prevalence of 29 PFAS, and developing methods to detect all 12,034 PFAS analytes.

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

- Define PFAS, describe some of their uses, and appreciate their complex health effects
- Describe the process of how EPA monitors and regulates emerging contaminants
- Explain how high-resolution mass spectrometry can be used to detect 'all' PFAS

- Elevating Workforce Strategies and Uniting Efforts for a Stronger Workforce: Recruitment, Retention, Diversity, and Visibility {WFT, MLD} [PAR, SLS, WDT]

588-836-24 – 1.0 contract hour for this session

In today's dynamic professional landscape, the ability to attract, retain, and cultivate a diverse and visible laboratory workforce is paramount. This course combines these essential elements, delving into innovative approaches and best practices designed to enhance laboratory workforce effectiveness. This session emphasizes the importance of collaboration and cohesion in achieving a robust and resilient laboratory workforce, exploring the intricacies of recruitment and retention with a strong emphasis on diversity and visibility. Attendees will gain insights into the latest strategies, tools, and success stories from experts in the field, equipping them to elevate their own laboratory workforce initiatives and unite their efforts for a stronger, more vibrant workforce.

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

- Utilize the data collected on laboratory retention and recruitment to advocate for a robust workforce at their own institution
- Replicate the models used to “grow your own” lab in their community through the examples we will share under the topic of collaboration
- Incorporate the information learned in examining the role of diversity, equity, inclusion and accessing in mitigating workforce burnout within their laboratory departments

- Building Capacity and Sustainable Laboratories through Twinning in Indonesia {WFT, MLD} [PAR, SLS, WDT]

588-837-24 – 1.0 contract hour for this session

In collaboration with the Ministry of Health of Indonesia, APHL, through cooperative agreement funding provided by the CDC, has initiated a partnership program between the Yogyakarta and Palembang Public Health Laboratories in Indonesia and the Michigan State Public Health Laboratory. Representatives from Michigan will elaborate on the development of this partnership, the in-person exchanges, and the webinars that have collectively enhanced the laboratory capacity of all three facilities.

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

- Explain how the twinning relationship between US domestic and international public health laboratories can build laboratory capacity for both laboratories
- Describe how the US public health laboratories' experience in managing state public health laboratories can be essential to provide guidance for international public health laboratories building capacity in public health laboratory management

- Save Money, Save Time, Be More Efficient: Process Improvement for Enteric Pathogens (RS) {MCB, QMS, GEN} [DDT, QLM, SLS]

588-838-24 – 1.0 contract hour for this session

The number of specimens and isolates received at public health laboratories (PHLs) for enteric isolation, identification and characterization has increased due to culture-independent diagnostic tests. The test volume increase has placed an additional burden on PHLs. This session will provide strategies and examples of how PHLs have used process improvement to reduce cost and increase efficiency.

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

- Describe the steps in process improvement and the vital role that process improvement plays in maintaining a successful laboratory
- Explain how process improvement can be used to reduced test cost and increase efficiency
- List case studies where process improvement has been used by a variety of public health institutions to improve testing services

Thursday, May 9

7:30 am – 8:30 am

Roundtable Sessions

- Health Equity and the Role of Public Health Laboratories in Advancing Access to Laboratory Testing during Public Health Emergencies {WFT, ETH, MLD} [COM, SLS, WDT, SEI]

588-839-24 – 1.0 contract hour for this session

This roundtable will explore health equity issues related to laboratory testing during public health emergencies and the role of public health laboratories in advancing equitable access to point-of-care testing to mitigate community transmission. Speakers will share information about a scoping review to identify promising approaches to increase equitable access to testing during public health emergencies and speak to the value of partnership between clinical laboratories and public health laboratories in advancing health equity.

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

- Identify strategies or promising practices to increase equitable access to point-of-care testing in public health emergencies
- Describe the role of PHLs in increasing equitable access to point-of-care testing in public health emergencies

- Collaboration with Partners during Food Safety Investigations – A One Health Perspective (RS) {QMS, MLD, COM} [FSS, COM, OHA]

588-840-24 – 1.0 contract hour for this session

Food safety investigations require coordination for expeditious response. The concept of One Health considers threats to the health of humans, animals, and environment and strategies to improve outcomes. Recent foodborne outbreaks and involvement of regulatory frameworks including the FDA's Laboratory Flexible Funding Model (LFFM) and Rapid Response Teams (RRT) will be discussed.

Participants will highlight successes and identify approaches to improve communication and collaboration in preventing and responding to food safety events.

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

- Describe how effective collaboration between relevant partners can expedite the investigation of food safety events
- Discuss the utility of One Health concepts to improve response in complex food safety investigations
- Identify tools and model practices employed to facilitate robust coordination with partners

- Practice, Practice, Practice: Regional Consortia Tabletops and Their Utility for Enhancing Regional Preparedness {WFT, SEC, EMR} [BIOS, SLS, WDT]

588-841-24 – 1.0 contract hour for this session

Representatives from the Southeast CoLABorators and Pacific Rim Regional Consortia will discuss the utility of tabletop exercises as part of their preparedness activities. These tabletop scenarios enabled states within these regions to exercise their continuity of operations plans (COOP) when dealing with a wide range of emergency situations, from viruses to natural disasters to cyber-attacks.

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

- Describe key components of a tabletop exercise, including scenario development, facilitation, and evaluation
- List several different types of tabletop exercises
- Demonstrate how to use practical strategies for integrating tabletop exercise findings into public health laboratory COOPs

- Moving Facilities: Continuity of Operations Planning and Considerations for Safety and Security {SEC, MLD, QMS} [COM, SLS, QLM]

588-842-24 – 1.0 contract hour for this session

Public health laboratory leaders and partners with experience in laboratory safety, security, quality systems and transition planning for moving into a new facility will lead this roundtable discussion focusing on move preparation planning and facilitation of the actual move, coordination of quality systems processes to implement prior to opening the new laboratory facility, and considerations for evaluating facility safety and security.

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

- Identify safety and biosecurity requirements for conducting safety and biosecurity inspections of the new laboratory space
- Define quality system requirements that need to be addressed prior to move in
- Describe staffing strategies for transitioning to new laboratory space

- Passion for the Profession: Building the Public Health Laboratory Team! {WFT, MLD} [WDT, COM]

588-843-24 – 1.0 contract hour for this session

What sets us apart from other healthcare professions? Our laboratory science profession needs a united vision to portray our profession and identify ourselves. Individual titles may differ; however, identifying ourselves by a common name is important for establishing recognition of our profession.

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

- Define professional identity
- Discuss opportunities to increase visibility of the laboratory science profession
- Discuss how human resources assigned position title may not reflect your professional identity

9:00 am – 10:00 am

Plenary Session

- Public Health Showdown: Tuberculosis vs. *Candida auris* – Unveiling the Greatest Threat {MCB, SRV} [DDT, OHA, SUR]

588-844-24 – 1.0 contract hour for this session

Two formidable adversaries, Tuberculosis and *Candida auris*, are both public health threats causing significant morbidity and mortality worldwide. This interactive debate-style session will dissect these microbial foes and shed light on their respective impacts.

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

- Describe the global public health impact of both Tuberculosis and *Candida auris*
- List the unique characteristics of Tuberculosis and *Candida auris* that make them formidable public health threats
- Demonstrate the need for continuing resources to combat both Tuberculosis and *Candida auris*

10:30 am – 11:30 am

Plenary Session

- The Climate Crisis: Public Health Laboratories' Call to Action {MLD, SRV} [OHA, PAN, SLS]

588-845-24 – 1.0 contract hour for this session

Exploring the impacts of climate change on infectious diseases, environmental safety, and discussing adaptive and proactive approaches for effective response.

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

- Discuss the impacts of climate change on environmental health and safety
- Highlight the role of laboratory testing in monitoring and response to climate events
- Explore collaborations between infectious disease and environmental health to enhance preparedness for changing environmental parameters such as increasing water temperatures and extreme precipitation

11:30 am

APHL 2024 Adjourns