



CALIFORNIA PUBLIC HEALTH LABORATORY  
DIRECTOR TRAINING PROGRAM

## LABORATORY DIRECTOR TRAINING MANUAL

Prepared by:

CALIFORNIA DEPARTMENT OF PUBLIC HEALTH



CALIFORNIA ASSOCIATION OF PUBLIC HEALTH LABORATORY  
DIRECTORS



First Edition: 2017

**REVISIONS OR ANNUAL REVIEW DOCUMENTATION:**

No.	What has been revised?	Pages	Revised by: Initials/Date
1	New	All	NG, ZB, LG 4/9/2017
2	Ordered items in table of contents; revised duties of committee		KL 6/9/2017
3	Lists and tables moved to appendices		KL 6/15/2017
4	Highlighted missing information		KL 6/23/2017
5	Incorporated updates		ZB 7/7/2017
6	Incorporated updates		KL 7/28/2017
7	Incorporated updates		DF 5/7/2024
8	Incorporated updates		DF 11/12/2024
9	Incorporated updates		HN 12/26/2024
10	Incorporated updates		SL 03/28/2025
11	Incorporated updates		SL/HN 08/01/25
12	Incorporated updates		KL 10/7/2025

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## LABASPIRE LABORATORY DIRECTOR FELLOWSHIP TRAINING PROGRAM

### **INTRODUCTION TO THE PROGRAM**

The LabAspire Laboratory Director Fellowship Program, overseen by the California Department of Public Health (CDPH) Center for Laboratory Sciences (CLS) and the California Association of Public Health Laboratory Directors (CAPHLD), is aimed at developing core leadership and administrative skills for selected candidates to qualify to become California Public Health Laboratory Directors.

Public Health Laboratory Directors (PHLDs) must meet federal CLIA regulations to direct a laboratory, including possession of an acceptable doctoral degree, two years of laboratory training or experience, or both; and two years of laboratory experience directing or supervising high complexity testing (42 CFR §493.1443; see Appendix 10). Additionally, the California Code of Regulations specifies that the Director of a California Public Health Laboratory must be a certified Public Health Microbiologist (PHM) with four or more years of experience in public health laboratory work (17 CCR §1302)<sup>1</sup>.

### **BACKGROUND OF THE PROGRAM**

From the 1970s until the mid-1980s, the California Department of Health Services offered a postdoctoral residency program in medical microbiology and public health. This program was approved by the American Academy of Microbiology Continuing Postgraduate Educational Program (CPEP) and led to each graduate being eligible for certification as a Diplomate by the American Board of Medical Microbiology (ABMM). Unfortunately, this program was discontinued due to a lack of funding in the mid-1980s. An impending shortage of qualified personnel to fill local public health laboratory director positions in California prompted the legislature to approve funding for the LabAspire Program in 2005, supporting the public health laboratory infrastructure. The LabAspire program included a Postdoctoral Residency Training Program in Clinical and Public Health Microbiology and supported bachelor's and graduate-level students in public health through various educational and training requirements. Funding for the LabAspire Program was discontinued in 2012. However, the need for qualified candidates to direct California's Public Health Laboratories (PHLs) continued to increase. The California Department of Public Health (CDPH) Public Health Laboratory System Working Group (PHLSWG), a stakeholder group formed to discuss strategies to strengthen the PHL system in California, published a white paper specifically recommending funding an Assistant Laboratory Director training program at local PHLs as the fastest method to develop California PHLDs<sup>2</sup>. This method was recommended because it would provide much-needed workforce capacity, allow for mentoring opportunities

between PHLDs and trainees, and facilitate a smoother transition when the current PHLDs retired.

From 2017 to 2019, the California Department of Public Health was able to provide short-term funding through the Centers for Disease Control and Prevention (CDC) Public Health Emergency Preparedness Program (PHEP) to support limited reinstatement of the LabAspire Program. Additional short-term funding to continue the limited reinstatement of LabAspire from 2021 to 2024 was identified in the COVID ELC Enhancing Detection Strengthening Public Health Preparedness Supplement 1. Short-term funding for LabAspire Public Health Laboratory Director training was also specifically allocated in State Budget Acts AB 179 Item 4265-001-0001 Provision 31 and Item 4265-111-0001 Provision 18 (2022-2025), AB 102 Item 4265-001-0001 Provision 13 and Item 4265-111-0001 Provision 6 (2023-2026), and AB107 Item 4265-001-0001 Provision 11 and Item 4265-111-0001 Provision 6 (2024-2027) as part of the [Public Health Equity and Readiness Opportunity \(HERO\) Initiative](#). In all these programs, financial support is provided to local public health laboratories to support the training of Assistant Laboratory Directors for succession planning. Post-graduate Fellows are placed in local public health laboratories to receive managerial experience, and financial support for graduate-level education is available to experienced laboratory supervisors and managers to complete educational requirements. In this way, individuals who are already partially qualified can complete the requirements to become a laboratory director under the Clinical Laboratory Improvement Amendments (CLIA) 42 CFR §493.1443 and California Code of Regulations 17 CCR §1302.

## **LABASPIRE COMMITTEE ROLES, RESPONSIBILITY, AND DUTIES**

The LabAspire Committee comprises members from CAPHLD and CDPH who are responsible for LabAspire's program development and management. Responsibilities include developing training criteria and materials, overseeing host laboratory and Fellow selection, and acting as a liaison to the California Emergency Preparedness Office to facilitate program funding. A more detailed summary of the LabAspire Committee's Roles, Responsibilities, and duties, along with its current members, is outlined in Appendix 6.

## **DESCRIPTION OF THE PROGRAM**

The LabAspire Laboratory Director Fellowship provides doctoral education opportunities for experienced laboratory supervisors and managers, as well as experience in administrative and technical skills needed to lead a public health laboratory for doctoral-level scientists. Both prospective and admitted Fellows may participate in LabAspire training activities before their official Fellowship start date. Each Fellow is assigned to a sponsoring Public Health Laboratory or group of laboratories for the duration of their Fellowship. To meet LabAspire

requirements, Fellows must be in a full-time supervisory position in a local California Public Health Laboratory; they may work as Assistant Laboratory Directors, Laboratory Managers, or Supervisors. Fellows work in sponsoring Public Health Laboratories to gain an understanding of the Public Health Laboratory system and how it relates to communicable disease, prevention, surveillance, and control. LabAspire training includes but is not limited to regulatory requirements, laboratory budgeting and finance, laboratory administration, safety, quality assurance, technical problem solving, personnel management, and networking with public health partners. LabAspire training may also include rotations at other health departments, clinical or public health laboratories, and related programs. Sponsoring Public Health Laboratories are responsible for supervising their Fellows' training and progress in completing program requirements. Fellows must demonstrate satisfactory progress every year to continue participating in the LabAspire program. Fellows will be required to take board examinations and meet program benchmarks to continue in the program. It is important to note that completion of the Fellowship program does not guarantee a new job and/or promotional opportunity. In the event there are changes in funding, Fellows may still participate in LabAspire training activities.

## **LAB ASPIRE PROGRAM ELIGIBILITY REQUIREMENTS**

The LabAspire Fellowship program is open to U.S. citizens and permanent residents.

Applicants may be internal applicants currently certified as Public Health Microbiologists and employed as California Public Health Laboratory line staff with 2 or more years of high-complexity laboratory testing experience, including experience as a PHL Assistant Director, Manager, or Supervisor.

External applicants may possess either a Doctoral degree (PhD, DrPH, ScD, DCLS, MD\*, or DO\*) in a scientific discipline such as biology, microbiology, chemistry or medicine; or a combination of a Masters' or Bachelors' degree in a scientific discipline such as biology, microbiology or chemistry and 2 or more years of high-complexity laboratory testing experience in a California Public Health Laboratory\*\*, including experience as a PHL Assistant Director, Manager or Supervisor. Applicants without a California Public Health Microbiologist license must work with their host Laboratory Director/Manager/Supervisor to complete PHM training within the first year of entering the LabAspire program, and their continued participation in LabAspire is contingent on successful PHM training and certification. These candidates are classified as LabAspire Participants.

Applicants with a master's or bachelor's degree and laboratory experience are accepted based on their enrollment in an accredited United States university

graduate program to meet the education and training requirements for approved certification boards for Laboratory Directors of High Complexity Testing.

Applicants seeking a master's degree must declare that they intend to obtain a doctoral degree to become a Public Health Laboratory Director. The LabAspire Program is not intended for individuals desiring an MPH without the possibility of fulfilling this goal.

Applicants must be sponsored by a California Public Health Laboratory; training and experience requirements must be completed in a high complexity CLIA-certified PHL <sup>3</sup>.

### Notes:

\*must be licensed to practice in the State of California; board certification and experience requirements are different from non-medical doctoral degrees 42 CFR 493.1443

\*\*1 year of post-doctoral training in a CLIA-certified clinical laboratory may be substituted for 1 year of required training in a PHL. One year of post-doctoral Fellowship can be substituted for 6 months of PHM training <sup>3</sup>.

\*\*42 CFR 493.1443 Be a doctor of medicine or doctor of osteopathy licensed to practice medicine or osteopathy in the State in which the laboratory is located; and(ii) Be certified in anatomic or clinical pathology, or both, by the American Board of Pathology or the American Osteopathic Board of Pathology; or (2)(i) Be a doctor of medicine, a doctor of osteopathy, or doctor of podiatric medicine licensed to practice medicine, osteopathy, or podiatry in the State in which the laboratory is located; and(ii) Have at least 2 years of experience directing or supervising high complexity testing; and(iii) Have at least 20 CE credit hours in laboratory practice that cover the director responsibilities defined in [§ 493.1445](#) <sup>1</sup>

## LABASPIRE FELLOWSHIP APPLICATION

The LabAspire Fellowship application includes a narrative statement, a letter of recommendation from a CA PHL Director, references from professors, supervisors, or subordinate laboratory staff, curriculum vitae, copies of licenses and certifications, copies of transcripts from all degree-granting institutions, and proof of US citizenship or permanent residency. It is the responsibility of the applicant to ensure all materials are received by CDPH and CAPHLD.

## **SPONSORING LABORATORY APPLICATION**

The sponsoring laboratory application includes a statement of intent, documentation of laboratory certification, a training plan, a training budget, and a letter of support from the local health jurisdiction.

## **APPLICATION FORMS**

**LabAspire Fellowship and Host Laboratory application forms and instructions** are available on the CAPHLD website

<https://www.caphld.org/labaspire>. Refer to Appendices 7 & 8. Applicants should submit electronic applications and materials to [CAPHLD.LabAspire@gmail.com](mailto:CAPHLD.LabAspire@gmail.com), [Shantelle.Lucas@cdph.ca.gov](mailto:Shantelle.Lucas@cdph.ca.gov), and [Wil.Velasco@cdph.ca.gov](mailto:Wil.Velasco@cdph.ca.gov). If funding is available, CDPH will continue to accept applications on an ongoing basis through December 31, 2026.

Only complete applications will be reviewed. Applications will initially be reviewed by the LabAspire Program Manager, and then by a panel representing CDPH and CAPHLD Committee members. After the review, the Program Manager may contact Fellowship candidates and sponsoring laboratories for additional materials and interviews as needed. The same forms are used for both new applications and renewal applications.

Fellows will be required to provide quarterly progress reports, which may include academic transcripts; take board certification exams for Laboratory Directors of High Complexity Testing, such as those offered by the American Board of Bioanalysis (ABB) or American Board of Medical Microbiology (ABMM); and meet program benchmarks to continue in the program. CDPH-LFS will assist with regulatory compliance by reviewing Fellows' qualifications for board eligibility as needed.

For questions, please contact the LabAspire Program Manager, Dr. Shantelle Lucas, at [Shantelle.Lucas@cdph.ca.gov](mailto:Shantelle.Lucas@cdph.ca.gov) or [CAPHLD.LabAspire@gmail.com](mailto:CAPHLD.LabAspire@gmail.com) and LabAspire Program Coordinator, Dr. Hamida Nusrat, at [hamida.nusrat@cdph.ca.gov](mailto:hamida.nusrat@cdph.ca.gov) or [CAPHLD.LabAspire@gmail.com](mailto:CAPHLD.LabAspire@gmail.com)

## **PROGRAM REQUIREMENTS**

LabAspire Program completion requirements are based on CLIA and California Laboratory Field Services (LFS) regulations for high-complexity clinical Laboratory Director / California Public Health Laboratory Director.

[Educational requirements for Fellows needing a doctoral degree](#)

- Doctoral degrees acceptable to CLIA (see 42 CFR §493.1443 for details)
  - PhD, DrPH, MD\*, DO\*, DSc, DCLS
  - \*must be licensed to practice in the State of California; certification and experience requirements are different from other doctoral degrees

**DrPH:** Applicants with a master's or bachelor's degree are accepted based on their enrollment in an accredited United States university graduate program to meet the education and training requirements for approved certification boards for Laboratory Directors of High Complexity Testing. Currently, the only online DrPH program directly meeting federal requirements for diagnostic laboratory testing is the University of South Florida DrPH in Public Health and Clinical Laboratory Science and Practice. USF requires five (5) years of laboratory experience to matriculate into the program. The laboratory experience can be in a public health, clinical, or veterinary laboratory. Please visit USF's website for more information. (<https://health.usf.edu/publichealth/apply/doctoral/drph-phclsp>)

<sup>4</sup>LabAspire applicants are responsible for consulting with their Host Laboratory, the LabAspire Committee, and LFS to ensure that their PhD coursework and projects apply to federal and state Laboratory Director requirements and are compatible with PHL employment and supervisory experience requirements.

- **PhD:** A variety of in-person PhD programs are available from accredited universities. LabAspire applicants are responsible for consulting with their Host Laboratory, the LabAspire Committee, and LFS to ensure that their PhD coursework and projects apply to federal and state Laboratory Director requirements and are compatible with PHL employment and supervisory experience requirements. For PhD programs, careful consideration of in-person course attendance requirements and the development of a well-defined dissertation project with a realistic timeline are essential.
- **MPH (prerequisite for DrPH):** A variety of online and in-person MPH programs are available from accredited universities. LabAspire applicants are responsible for consulting with their Host Laboratory, the LabAspire Committee, and LFS to ensure that their MPH coursework and projects apply to federal and state Laboratory Director requirements and are compatible with PHL employment and supervisory experience requirements.

Applications to enroll in graduate programs that are not specifically designed to meet national board certification requirements for a high-complexity Clinical Laboratory Director; therefore, will need to be vetted by the LabAspire Program Manager and Committee before enrollment, and will be approved on a case-by-case basis.

## California Laboratory Field Services (LFS) Requirements <sup>5-7</sup>

PHM experience- See Appendix 6 for Letter of Experience to shorten PHM training.

Public Health Microbiologist (PHM) is the California-specific license required to practice diagnostic microbiology and immunology in all California Public Health Laboratories (CCR Title 17 Section 1079). The California PHM Certification was created in 1939 to specify minimum laboratory personnel standards; it significantly predates the requirements of CLIA 1988. To qualify for certification as a Public Health Microbiologist in California, an applicant must have completed a bachelor's or higher degree in medical or public health microbiology or an equivalent, scientific major from an accredited university, with coursework approved by LFS. The applicant must also register for the LFS [Public Health Microbiologist Trainee License](#) and apply to and complete a state-approved PHM training program at CDPH or an LFS-approved local public health laboratory (CCR Title 17 Section 1079-1080). For applicants with previous diagnostic public health or clinical laboratory training or experience in the United States, including CPEP post-doctoral training programs, there is an experience evaluation form that can be requested from LFS to determine if some or all of the applicant's previous experience applies to the PHM training requirements. Only United States-based clinical laboratory training and experience is applicable; foreign or non-clinical (e.g., research) laboratory experience will not fulfill the requirements. After completing the PHM training requirements, the trainee must successfully pass the American Association of Bioanalysts (AAB) Board of Registry (ABOR) PHM Certification examination, which is offered twice a year. Note that for most PHLD applicants, the CCR Title 17 Section 1302 PHLD requirements for 4 years of PHM experience begin only after PHM Certification is achieved; therefore, LabAspire Fellows who are not already PHM certified are required to complete their PHM training and exam in the first year of their Fellowship, so that they can quickly get on track to meet the California personnel requirements for PHLD.

### Board Certification Requirements

- For PhD, DrPH, DSc, and DCLS degree holders, LFS currently accepts American Board of Bioanalysis (ABB) and American Board of Medical Microbiology (ABMM) Laboratory Director Board Certifications.
- LabAspire Fellows and Host Laboratories are encouraged to familiarize themselves with each certifying organization's requirements for admission to their board exam. This specific, detailed information is available on the ABB and ABMM websites.
- Fellows pursuing ABB certification may take the Technical Supervisor (TS) exam separately from the General Supervisor (GS) exam. Individuals may be eligible for admission to the ABB TS exam as soon as they complete 1 year of experience as certified or licensed high-complexity diagnostic laboratory testing personnel.

One year of post-doctoral training in a CLIA-certified clinical laboratory may be substituted for 1 year of required training in a PHL. Experience from a clinical laboratory may be substituted for experience in a public health laboratory. **NOTE:** According to *LFS*, the Fellow must document prior experience in a CLIA laboratory.

### **Time Limits for Enrollment in Program**

Years of participation in the LabAspire program will be assessed on a case-by-case basis. Depending on the academic and experience requirements, Fellows may be enrolled for up to 5 years to complete doctoral degree requirements and up to an additional 2 years to complete MPH requirements.

### **FUNDING**

See Appendix 9 for information on funding to support LabAspire Fellows.

### **GENERAL OBJECTIVES**

#### **Orientation to Host Laboratory Policies and Procedures**

The Fellow will review all laboratory policies, procedures, and relevant documents, and make a schedule to rotate through all the laboratory technical sections to familiarize themselves with the scope and detail of the functions of the laboratory. If the Fellow does not have at least a year of experience working in their host laboratory, the Fellow is expected to rotate through and become familiar with the technical sections within the first 12-24 months of commencement of the program in order to meet CLIA Technical Supervisor requirements.

#### **Public Health Laboratory Missions**

The Fellow will become familiar with the various functions of Public Health Departments and PHLs and gain experience representing the host laboratory in interactions with various public health programs and laboratory clients.

#### **Regulatory Compliance**

All public health laboratories that perform clinical testing must follow Clinical Laboratory Improvement Amendment (CLIA) regulations set forth by the Centers for Medicare and Medicaid Services (CMS), which dictate personnel qualifications, competency assessments, and quality standards for laboratory testing. Additionally, public health laboratories must follow California State

requirements related to laboratory operations and public health noted in the California Code of Regulations, California Health and Safety Code and California Business and Professions Code as defined in BPC 1206(a)(15); 1206.5(a)(4)(b)(4) (c)(4) in the specialty of microbiology in a clinical laboratory. PHLs may also be required to follow additional regulations depending on the environmental or other testing services they provide. PHLs must also comply with regulations that are specific to certain pathogens<sup>8-9</sup> in the Federal Select Agent Program. See Appendix 1, Syllabus, Regulatory Compliance for a list of additional regulatory agencies.

## **Facilities Management**

Facilities management includes design, implementation, maintenance, and repairs to support laboratory operations, security plans, and emergency operations. The PHLD works with its jurisdiction's facilities management team to ensure the correct functioning and safe operation of the laboratory, make renovations, and acquire and maintain specialized equipment (for example, biological safety cabinets) that require facility support and maintenance.

## **Management Principles**

Fellows will learn core principles of management and work on developing their management style for effective team building and operational success. General principles include leadership, decision-making, project management, and personnel management. Personnel are the most valuable resource of a PHL, and Fellows will learn effective practices and communication methods for personnel management. Fellows should have access to supervisory, management, and/or leadership training through their employer and will also receive additional laboratory-specific resources and training through CAPHLD and APHL. Fellows should make use of online trainings such as Laboratory Management University (LMU) through ASCP or COLA and other resources as mentioned under 'Online Activities' in Appendix 2.

## **Management Operations**

As future Laboratory Directors, Fellows need to learn to perform management functions related to project management, workflow analysis, budget planning and management, contracts, purchasing, and billing. Each jurisdiction will have different requirements, but the concepts of operations are the same. Operational management may also include developing and maintaining quality management systems, personnel training and competency assessments, and assessing the laboratory test menu.

## **Information Technology**

With the transition to electronic health records, Information Technology (IT) is an essential component of laboratory operations. Fellows should be aware of important considerations when assessing a Laboratory Information Management System (LIMS), including the benefits of laboratory interfacing, HL7 messaging, Electronic Laboratory Reporting requirements (particularly related to CalREDIE), patient health record portals that might be utilized by a health department, electronic options for inventory management and document control, and billing software. IT security is also extremely important and must be considered for a variety of applications within the laboratory.

### **Environmental Laboratory Accreditation Program (ELAP)/TNI 2016**

In addition to clinical testing, PHLs that perform environmental water testing are regulated by the California State Water Resources Control Board under ELAP/TNI 2016 regulations. Many local PHLs in California perform some water testing; therefore, it is important that LabAspire Fellows are familiar with ELAP/TNI 2016 regulations.

### **Other Programs**

In addition to core clinical and environmental testing, PHLs may also provide testing for other programs, including national surveillance (Laboratory Response Network, PulseNet, FoodNet, etc.) and California surveillance (i.e., COVIDNet, Respiratory Laboratory Network, MeaslesNet) networks. Depending on the priorities of the local health jurisdiction, testing for other local, state, or federal programs may be performed.

### **Membership and Committee Participation**

Public Health Laboratory Directors serve as leaders in the public health community, state-wide. To cultivate an active role as future laboratory leaders, LabAspire Fellows are expected to participate as associate members of state and national public health laboratory organizations such as CAPHLD and APHL. One of the best ways to contribute to these organizations is by joining a committee. Committee participation not only benefits the organization by moving important initiatives forward but also provides the Fellow with valuable career development and networking opportunities.

### **TRAINING PROGRAM:**

## **BENCHMARKS**

The following benchmarks will be used to indicate successful matriculation through the program:

- Fellow and Host Laboratory Director Quarterly Reports: timely completion
- Successful completion of the on-site laboratory training program
- Satisfactory grades in coursework (for Fellows in MPH and DrPH programs) each semester/quarter
- For those admitted to LabAspire without a California Public Health Microbiologist (PHM) certification, completion of the PHM Training program as well as obtaining PHM certification by passing the board examination within the first year of admission to the program.
- Admittance to the ABB Technical Supervisory examination and successful passage within three years of admission to the program.
- Pass board certification exams within three (3) attempts. This will be assessed on a case-by-case basis. If the Fellow exceeds the number of times they can take a particular board exam, the Fellow and the host laboratory director will need to explore the option to take another board certification.

## **ACTIVITIES**

### **Meetings**

LabAspire online meetings will be held monthly on the 3<sup>rd</sup> Friday of the month, from 11:00 am to 12:30 pm. Meetings will be an opportunity for Fellows, host laboratories, and subject matter experts to present on a training topic.

### **Curriculum, resources, online trainings (Appendices 1 &2)**

### **Additional rotations**

Fellows whose host laboratory does not offer all the training topics are expected to work with their sponsor Laboratory Director to arrange for additional rotations in other PHL facilities.

### **Board examinations**

The American Board of Bioanalysis (ABB) and the American Board of Medical Microbiology (ABMM) examinations meet CLIA requirements for board examinations for High-Complexity Laboratory Directors. Laboratory Field Services regulations currently state that ABB is the acceptable board certification for California PHLD; however, the ABMM is accepted as well. Fellows are encouraged to qualify for and attempt an ABB Technical Supervisor board exam within their second or third year of LabAspire (depending on educational level).

The ABB Technical Supervisor exam simply requires experience in high-complexity clinical or PHL testing, so it is accessible to certified and licensed Fellows who don't yet have supervisory experience.

For more information about approved certification boards for Laboratory Directors of High Complexity Testing, visit the following website to learn more: [https://www.cms.gov/Regulations-and-Guidance/Legislation/CLIA/Certification\\_Boards\\_Laboratory\\_Directors.html](https://www.cms.gov/Regulations-and-Guidance/Legislation/CLIA/Certification_Boards_Laboratory_Directors.html)<sup>10</sup>

ABB and ABMM exam requirements are summarized below. Because requirements change over time, Fellows and Host Laboratories should reference the board organization website for the most up-to-date requirements.

### **ABB Exam Requirements**

#### **High-complexity Clinical Laboratory Director [HCLD - American Board of Bioanalysis \(ABB\)](#)**<sup>11</sup>

Candidates must hold a Ph.D. or Doctor of Science from an accredited institution in chemical, biological, clinical medical laboratory science, or medical technology, including at least 32 semester hours in chemistry and biology. Alternatively, candidates with a DCLS or other clinical/professional degree outside these fields must have completed 16 semester hours of doctoral-level coursework with an approved thesis project related to laboratory testing for the diagnosis, prevention, or treatment of disease. Applicants must have four years of clinical laboratory experience in a High Complexity Laboratory within ten years of the application date, with at least two of those years immediately preceding the application. Candidates must also pass the General Knowledge and Public Health Microbiology (PHM), Clinical Microbiology, or other Technical Supervisory examinations. Acceptance to sit for the board exam requires evidence that the candidate's doctorate is in laboratory science, emphasizing research with clinical significance. All clinical laboratory experience must have been obtained in California or other U.S. states; experience from international laboratories is not accepted.

#### **Public Health Laboratory Director [PHLD - American Board of Bioanalysis \(ABB\)](#)**<sup>12</sup>

Candidates must hold a Ph.D. or Doctor of Science from an accredited institution in chemical, biological, clinical medical laboratory science, or medical technology, including at least 32 semester hours in chemistry and biology. Alternatively, candidates with a DCLS or other clinical/professional degree outside these fields must have completed 16 semester hours of doctoral-level coursework with an approved thesis project related to laboratory testing for the diagnosis, prevention, or treatment of disease. Within ten years of the application date, candidates must have experience in human and non-human testing for the diagnosis and/or

identification of disease pathogens, with at least two years immediately preceding the application. Of the required four years of experience, at least one year must be in a Public Health Microbiology or Clinical Microbiology laboratory performing human or non-human material testing for disease diagnosis. Candidates must complete 20 CEUs covering laboratory director duties. Acceptance to sit for the board exam is contingent on evidence that the candidate's doctorate is in laboratory science, with research demonstrating clinical significance. All clinical laboratory experience must have been obtained in California or other U.S. states; international laboratory experience is not accepted.

### **Diplomate by the American Board of Medical Microbiology (ABMM)** <sup>13</sup>

Candidates must be doctoral-level microbiologists who meet at least one of the following eligibility paths: (1) three years of relevant experience, (2) two years of CPEP-accredited training, or (3) completion of an Accreditation Council for Graduate Medical Education (ACGME)-accredited Fellowship in Medical Microbiology or Royal College of Physicians of Canada training (five years). All experience must occur after the doctoral degree is awarded. Acceptable doctoral degrees include Ph.D., M.D., D.O., DrPH, Doctor of Dental Medicine, Doctor of Dental Surgery, or Ph.D. in Health Sciences. Degrees such as Doctor of Clinical Laboratory Science and Pharm.D. are not acceptable. A recognized institution in the U.S. or Canada must award the degree. Candidates must have devoted at least 75% of their time to managing Public Health Microbiology (PHM) and Clinical Microbiology, encompassing both medical and administrative duties, including consultation with healthcare providers, clients, or health departments. Time spent in an Infectious Disease Fellowship may count toward experience requirements. Pathology residencies may count for up to six months, and CPEP-accredited Immunology programs may count for six months. Other non-CPEP-approved medical or clinical microbiology and postdoctoral programs may be credited for one to three years, depending on program review. The number of months devoted specifically to microbiology or molecular pathology during residency must be clearly documented on reference forms or transcripts. Once the admitted Fellow has successfully matriculated through the LabAspire program and passed either the ABB and/or ABMM, the graduated Fellow can apply with Laboratory Field Services to become a CA PHL Director. Below are the Laboratory Field Services (LFS) requirements for being a California PHL Director.

### **Time Limits for Retaking Board Exams Due to Failure**

Fellows may lose eligibility for funding after a certain number of time and exam attempts:

- Fellows with or pursuing doctoral degrees (PhD/DrPH) are limited to three (3) attempts to take the ABB (TS/PHLD/HCLD) and/or ABMM exams
- Fellows pursuing master's degrees (MPH/MS) are limited to 3 attempts for the TS exam before completing a doctorate *and* another 2-3 attempts after completing a doctorate.
- Fellows must pass the makeup exam within 3 years of failure
- Decisions on retaking exams after attempts are exceeded are contingent on a recommendation from the host Lab Director

## **PERFORMANCE METRICS**

### **FELLOWSHIP EXPECTATIONS**

LabAspire Fellows are expected to promptly meet the goals of their program. The goals and timelines for each Fellow will be established at the beginning of their Fellowship by recommendation of the LabAspire Executive Committee, along with the mutual agreement of the Host Laboratory and Fellowship candidate. For Fellows attaining a professional degree, requirements must be met by following the institution's policies and procedures. Progress towards meeting goals will be reported quarterly or as otherwise specified by the LabAspire Program. Fellows who fail to meet program goals may lose part or all of their funding and may be removed from the program at the discretion of the Lab Aspire Executive Committee.

LabAspire Fellows are expected to:

- Participate in all program activities and scheduled meetings
- Establish professional relationships with Fellows, peers, trainers, and directors
- Establish Fellowship performance objectives and maintain them
- Maintain professionalism
- Meet employment responsibilities
- Follow the employer's policies and procedures
- Maintain national and state regulations
- Follow the professional institution's policies and requirements if applicable
- Meet program benchmarks

### **HOST LABORATORY EXPECTATIONS**

LabAspire Host Laboratories are expected to be able to provide LabAspire Fellows with mentorship and learning opportunities that fulfill the objectives of the training program. Facilities must provide an adequate, safe, and conducive environment to perform necessary bench work and administrative duties.

A training plan should be developed for the Fellow that will cater to individual areas for which additional training is required. Where opportunities do not exist on-site to obtain the required experience, the sponsor Laboratory Director will work with other laboratories or organizations to optimize the Fellow's training experience. If the laboratory director does not work onsite and has limited availability to train the Fellow(s), the LabAspire Program Manager may be available to remotely mentor Fellow(s) as needed, or mentoring agreements can be implemented with one or more other, non-sponsor PHLs.

Host laboratories are expected to:

- Provide a supervisory position and document the supervisory experience of the Fellow to meet board exam requirements
  - Provide opportunities for leadership/management development
  - Set specific training goals with Fellow
  - Include Fellow in management meetings
  - Coach/mentor Fellow during discussions on laboratory-related issues
- Recommend available training courses on supervision, communication, project management, etc.
- Adhere to the training schedule and program deadlines
- Participate in regularly scheduled LabAspire meetings and provide program updates
- Provide continuous feedback to the Fellow
- Participate in activities with Fellow
- Assist Fellow in establishing professional relationships
  - Ensure Fellow's participation in scientific and professional meetings, events, conferences, etc.
  - Include Fellow in local jurisdiction administrative meetings and events.
- If evaluations and progress reports are satisfactory, the Host Laboratory will reapply for grant funding, as available.

## **PROGRESS REPORTS FOR HOST LABORATORIES AND LABASPIRE FELLOWS**

Progress reports will be completed quarterly by the Fellow and the sponsoring Laboratory. The purpose of the quarterly progress reports is to document educational and training activities and to provide an opportunity for the Fellow and the sponsoring Laboratory to give feedback on progress. Progress reports are to be completed by the Laboratory Director or a supervisory or managerial individual who is overseeing the Fellow. If the Fellow is currently serving as the Laboratory Manager, then the progress report should be completed by the Laboratory Manager's supervisor or the supervisor's designee. See Appendix 3 for Quarterly Progress Report Forms

Upon completion, the Fellow will email their quarterly progress report to the LabAspire Program Manager and/or Coordinator. The LabAspire Program

Manager will review the quarterly reports and summarize information to the LabAspire Committee. The summary of the Fellow's report will be relayed to the laboratory director so that he/she can complete their quarterly report form. Data will be reviewed, tracked, and trended by the LabAspire Program Manager.

## **EVALUATION CRITERIA**

The LabAspire Fellow will be evaluated and their progress reported for activities that further the Fellow's knowledge, understanding, and performance related to laboratory management. Criteria include:

1. Active participation in the LabAspire program and health department activities.
2. Training accomplishments, including technical training and continuing education opportunities.
3. Participation in professional organizations
4. Research and/or publications (if applicable)
5. Progress towards goals set by Laboratory Director/Mentor
6. Professional job performance.
7. Complement personality assessment.

The Host Laboratory will be given feedback by the LabAspire Fellow on their Fellowship experiences and whether the Host Laboratory is meeting expectations to provide optimal learning opportunities and guidance to meet the objectives of the LabAspire program.

## **TERMINATION PROCESS**

LabAspire Fellows are trained in state and local facilities and are funded through state appropriated allocations, and as such are subject to the same rules of conduct and code as State of California and Local Health Department employees. As future Public Health Laboratory Directors, LabAspire Fellows are expected to meet the highest standards of professional conduct and behavior. In addition, LabAspire Fellows are expected to meet the goals of their program on time. If a Fellow's conduct or performance does not meet expectations, termination of a postdoctoral Fellow's training may occur at the discretion of the LabAspire Executive Committee or the Host Laboratory.

A Fellow is subject to termination from the training program for infractions that, in the sole discretion of the LabAspire Executive Committee or the Host Laboratory, are deemed serious enough to warrant dismissal from the program. Major infractions are those that violate ethical or moral codes or cause a major breach in laboratory safety or security. Such an infraction could be deemed serious enough to warrant dismissal from the program. Minor infractions may result in

termination from the program if the LabAspire Executive Committee or the Host Laboratory deems they are repetitive and chronic in nature and, over time, cause a serious impediment to meeting the standards of the Fellowship program.

Examples of infractions that may result in some type of disciplinary action or termination include, but are not limited to, the following:

**Major Infraction**

- ❑ Sexual harassment
- ❑ Physical violence, threats, or intimidation
- ❑ Any breach of laws, regulations, or employer policies
- ❑ Inappropriate use of Information Technology (IT) resources such as
  - Conducting personal business on Fellowship time, including accessing social media, personal accounts, or inappropriate websites using IT resources
  - Any action that results in the introduction of malware or other security breaches
- ❑ Failure to follow the Laboratory Director’s, Training Coordinator’s, or senior supervisory staff’s directives that result in a breach of security or personal safety to any staff member
- ❑ Repeatedly failing to perform at a satisfactory level in one or more modules of the program or repeatedly failing board exams

**Minor Infraction**

- ❑ Repeated tardiness or absenteeism
- ❑ Misuse of laboratory resources
- ❑ Failure to follow supervisory instructions

Should one of the infractions listed above occur, disciplinary action will be as follows:

Occurrence	Action
1 minor	Informal counseling
2 minor	Informal counseling with memo in personnel file
1 major or 3 minor	Formal counseling report and/or dismissal

**APPENDIX 1. Monthly Training Programs/Laboratory Training**

## **Public Health Laboratory Mission**

Core Functions of Public Health nationwide

Core Functions of Public Health Laboratory (Defining local mission)

Coordinating with other public health programs

- Health Officer
- Epidemiology
- Communicable Disease Investigation
  - Contract Tracing
  - Disease Surveillance
- Immunizations
- Public Health Clinics
- Community Based Organizations
- Health Care Providers
- Others

## **California and Clinical Laboratory Improvement Amendments (CLIA) Regulations and Laboratory Director Day-to-Day Responsibilities**

- Physical plant of laboratory
- Testing personnel
- Delegation of Duties
- Quality Assurance Program

## **Regulatory Compliance**

- Clinical Laboratory Improvement Amendments 1988 (CLIA)
  - Accreditation and Licensure
  - Regulations
- California Laboratory Field Services
- California Department of Public Health
- California Code of Regulations Title 17
- California Health and Safety Code
- California Occupational Safety and Health Administration (Cal-OSHA)
  - Blood-Borne Pathogens
  - Biosafety
  - Biosecurity
  - Chemical Safety
- Laboratory Response Network (LRN)
- Division of Select Agents and Toxins (DSAT)
- Health Insurance Portability and Accountability Act of 1996 (HIPAA)

- Department of Transportation (DOT) and Federal Aviation Administration (FAA)
- International Organization for Standardization (ISO)
- Environmental Laboratory Accreditation Program (ELAP)
- Environmental Protection Agency (EPA and Cal-EPA)

## **General Management Principles**

- Management vs. Leadership
- Executive Leadership
- Personal Influence and Organizational Insight
- Management Functions: Planning, Organizing, Directing, Controlling (PODC)
  - Strategic Planning
  - SWOT Analysis
  - Determining and Setting Direction
- Studies on High Performance Organization (Team Character Inventory)
- Delegation of Duties
- Critical Thinking Skills
- Human Capital
- Time Management
- Project Management
- Management Ethics

## **Leadership/Supervision**

- Staff Management
  - Workflow Management
  - Successful and Effective Communication
  - Problem-Solving
  - Developing Successful Teams
- Decision Making
- Conflict Management
- Change Management
  - Sustaining Transformational Change
- Effective Meetings
  - Things to do during the meeting
  - Things to do after the meeting
  - Calculating the cost of meetings
  - Recurring meetings

## **Personnel Management**

- Personnel
  - Moderate Complexity
    - Technical Consultant
    - Clinical Consultant
    - Testing Personnel
  - High Complexity
    - General Supervisor
    - Technical Supervisor
    - Clinical Consultant
    - Testing Personnel
  - Delegation of Duties
- Job Descriptions/Duty Statements
- Recruitment and Selection
- Organizational Chart
- Staffing and Scheduling
- Performance appraisals/1:1
- Counseling and Discipline
- Termination and Resignations
- Labor Relations
- Lay-offs
- Training
- Competency Assessment
- Continuing Education
- Disciplinary Actions

## **Quality Assurance/Compliance**

- Quality Assurance Program
  - CLSI 12 Quality System Essentials
  - Quality Assurance Manual
- Quality Assurance
- Quality Control
  - Individualized Quality Control Plans
- Document Control and Record Retention
- Policies and Procedures
  - Policies

- Standard Operating Procedures
- Proficiency Testing
- Equipment Maintenance
- Incident reporting
  - Nonconformance
  - Corrective Action
- Risk Assessments
- Process Improvements
  - Including Lean/Six Sigma/Sigma
- Turn-around Time
- Benchmarks/Key Performance Indicators (KPIs)
- Corrected and Amended Reports
- Audits
  - Internal
    - Cadence
    - Quality Metrics
    - Review reports
  - External

### **Technical Expertise/Interpretation**

- Laboratory Policies
- Standard Operating Procedures
- Good Laboratory Practice
- Test Performance & Interpretation
  - Preanalytical
  - Analytical
    - Test Validation and Verification
    - Equipment
      - Selection and Implementation
        - Validation & Verifications
          - FDA LDT ruling
        - IQOQPQ
      - Preventative maintenance
      - Automation implementation
  - Postanalytical
    - Critical Call Backs
- Data Analysis
  - Data trending
  - Data efficiency
- Data Ethics and Integrity

- Laboratory Information Management Systems (LIMS)
- Literature Review – to stay current

## **Facilities Management**

- Principles of design and construction of laboratory facilities:
  - including BSL 2 and 3 requirements
  - heating air-conditioning ventilation and humidity levels for instrument and test operation
- Repairs
- Maintenance
- Security
  - Protocols
  - Bioterrorism
- Safety
  - Occupational Health and Safety Administration (OSHA)
  - American Industrial Hygiene Association (AIHA)
  - Medical Waste Management
  - Spill Management

## **Financial Management (Budget and Resource Management)**

- Budget preparation
- Cost Accounting
  - Direct
  - Indirect
  - Procedural Time Values
- Accounts Receivable and Accounts Payable
  - Fee for Service (Laboratory Fees)
  - Billing (invoicing)
- Grant Applications and Management
- Resource Management
  - Supplies
  - Equipment
    - Asset Management
- Vendor Relations

## **Management Operations**

- Governmental Regulations
- Unions and Civil Service
- Bid processes
- Contracts and Memorandum of Understanding
- Equipment acquisition
  - Negotiating delivery costs and warranties, shipment schedules and methods of shipment
- Inventory Management
- Marketing Management
- Emergency Management

### **Information Technology**

- LIMS basics
  - Data management
    - Traceability
  - Sample Tracking
- Validation
- Health Information Exchange
- CalREDIE reportable disease reporting
- Electronic Medical Records
  - bi-directional interfaces with instruments and with clinics, including web-based reporting and IT security
- Determining server needs (mechanical versus virtual)
- CPU requirement for laboratory applications
- E-Learning, Document Control and Data Mining Methods
- Security and Networking
- Cloud-based system

### **Environmental Laboratory Accreditation Program (ELAP)**

#### Review ELAP regulations

- TNI 2016
- Complete renewal and FOT forms (if applicable)
- Conduct internal audit/inspections and complete checklists
- Update worksheets and SOPs
- Review and update QA manual
- Review PT results and understand ERA PT ordering/schedules
- Assist with testing and participate in PT
- Complete competency on staff performing water testing

- Participate in ELTAC, SCWWRP, or other water-related meeting
- Complete LabAspire Water Training CD and quiz sheets

### **Other Programs (To Use Guest Speakers)**

- Childhood Lead Poisoning Prevention Program
- Clinical Blood Lead Testing
- Environmental Lead Testing
- Drug Testing
- Newborn Screening for Metabolic Disorders
- Biomonitoring
- Marijuana testing

### **Membership and Committee Participation**

California Association of Public Health Laboratory Directors (CAPHLD)  
Association of Public Health Laboratories (APHL)  
Committee participation in various workgroups for CAPHLD and/or APHL

## APPENDIX 2. ACTIVITY and READING LISTS

### Online Activities

1. LMU Fundamentals.. Available at <https://www.ascp.org/education/learning-format/certificate-programs/lmu>

2. Lab Manager Academy. Accessed on March 26, 2025.  
<https://labmanageracademy.com>

3. Basic Principles and Architecture of Laboratory Information Systems Certificate Program 2017. Accessed on March 26, 2025. Available at: <https://myadlm.org/education/online-certificate-programs/certificate-programs/basic-principles-and-architecture-of-laboratory-information-systems-certificate-program#:~:text=Basic%20Principles%20and%20Architecture%20of%20Laboratory%20Information%20Systems%20Certificate%20Program,-8.5%20ACCENT&text=This%20certificate%20program%20is%20completed,year%20of%20the%20purchase%20date.>

4. COLA Laboratory University. Laboratory Director CME Program.. Available at: <https://labuniversity.org/online-courses/lab-director-cme/>

(These are individual programs under Lab Director CME)

5. Bioterrorism Preparedness Training for LRN Sentinel Laboratories. Available at CDC Train: <https://www.aphl.org/courses/pages/bttrain.aspx>

6. CDC OneLab (Laboratory Training). Accessed March 26, 2025.  
<https://www.cdc.gov/lab-training/php/onelab/index.html>

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8. CMS- CE Courses for Laboratory Directors. Accessed on March 26, 2025.  
<https://www.cms.gov/medicare/quality/clinical-laboratory-improvement-amendments/training>

9. College of American Pathologist. Education Program for CLIA Laboratory Directors. Accessed on March 26, 2025.  
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## **Reading List:**

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2. Centers for Disease Control and Prevention. Core functions and capabilities of state public health laboratories: a report of the Association of Public Health Laboratories. MMWR 2002;51(No. RR-14):[1-7]. Accessed on April 8, 2017. Available at: <https://www.cdc.gov/mmwr/PDF/rr/rr5114.pdf>  
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Public Health 101 Series: <https://www.cdc.gov/training-publichealth101/php/training/introduction-to-public-health-laboratories.html>
3. Garcia, LS, ed. 2024. Clinical Laboratory Management, 3<sup>rd</sup> edition.
4. CLIA Brochures #1-11. Accessed on March 26, 2025. Available at: <https://www.cms.gov/medicare/quality/clinical-laboratory-improvement-amendments/brochures>
5. IQCP resources. College of American Pathologists. Accessed on April 8, 2017. Available at: [http://www.cap.org/web/home/lab/accreditation/iqcp-resources?\\_afLoop=49372938942166#!%40%40%3F\\_afLoop%3D49372938942166%26\\_adf.ctrl-state%3D100014z1ax\\_17](http://www.cap.org/web/home/lab/accreditation/iqcp-resources?_afLoop=49372938942166#!%40%40%3F_afLoop%3D49372938942166%26_adf.ctrl-state%3D100014z1ax_17)
6. IQCP Resources. CMS. Accessed on March 26<sup>th</sup>, 2025. <https://www.cms.gov/medicare/quality/clinical-laboratory-improvement-amendments/quality-control>
7. Developing an IQCP Plan. CDC. Accessed March 26, 2025. [https://stacks.cdc.gov/view/cdc/32566/cdc\\_32566\\_DS1.pdf](https://stacks.cdc.gov/view/cdc/32566/cdc_32566_DS1.pdf)
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9. CLIA. Accessed on March 26<sup>th</sup>, 2025. Available at: <https://www.cms.gov/medicare/quality/clinical-laboratory-improvement-amendments>

10. CDPH- Laboratory Field Services.  
<https://www.cdph.ca.gov/Programs/OSPHLD/LFS/Pages/RegulatoryInformation.aspx>
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<https://www.fda.gov/downloads/food/foodsafety/foodborneillness/foodborneillness/foodbornepathogensnaturaltoxins/badbugbook/ucm297627.pdf>
14. Centers for Disease Control and Prevention. Diagnosis and Management of Foodborne Illnesses: A Primer for Physicians and Other Health Care Professionals. MMWR 2004;53(No. RR-4):[1-29]. Accessed on April 8, 2017. Available at: <https://www.cdc.gov/mmwr/pdf/rr/rr5304.pdf>
15. CDC Foodborne Outbreaks. Accessed on March 26, 2025.  
<https://www.cdc.gov/foodborne-outbreaks/active-investigations/index.html>
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19. Laboratory Response Network for Biological Threats (LRN-B). Accessed on March 26, 2025. <https://www.cdc.gov/laboratory-response-network/php/biological/index.html>
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[https://www.cdc.gov/labs/pdf/SF\\_\\_19\\_308133-A\\_BMBL6\\_00-BOOK-WEB-final-3.pdf](https://www.cdc.gov/labs/pdf/SF__19_308133-A_BMBL6_00-BOOK-WEB-final-3.pdf)
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24. American Biological Safety Association. Accessed on April 8, 2017. Available at: <https://www.absa.org/trainingtools.html>
25. Biosafety and Biosecurity: Minimizing the Risks in the Laboratory. Accessed on April 8, 2017. Available at: [https://www.cdc.gov/labtraining/cdc-lab-training-courses/biosafety\\_biosecurity\\_minimizing\\_risks\\_in\\_lab.html](https://www.cdc.gov/labtraining/cdc-lab-training-courses/biosafety_biosecurity_minimizing_risks_in_lab.html)
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## APPENDIX 3. QUARTERLY PROGRESS REPORTS

**Goal:** To track progress of Fellow's matriculation through the program.

**1. Which areas of laboratory administration have you received training?  
Select all that apply.**

Administration  
Biosafety and/or Biosecurity  
Budgeting/Financial Management  
Effective Meetings  
Facilities Management  
General Management  
Information Technology  
Leadership/Supervisory  
Marketing Management  
Operation Management  
Personnel Management  
Project Management  
Public Health Missions (e.g. Childhood Lead Poisoning Program)  
Quality Assurance Management  
Regulatory Compliance  
Resource Management  
Other Programs

**If you would like to denote any specifics about the trainings received in the areas noted above, please explain below.**

**2. Which technical skills have you received training in? Select all that apply.**

Microbiology  
Public Health Microbiology  
Epidemiology  
Environmental  
Surveillance Testing  
Validations  
Verifications

**If you would like to provide any specifics about trainings received in the areas noted above, please explain below.**

**3. Have you passed any board exams during your Fellowship?**

Yes  
No

If yes, please note what board certification and dates. If no, please note which board exam you intend to take and when.

4. Which of the following activities have you participated in this quarter? Select all that apply.

Attend/Present at Conferences (can obtain CEUs, e.g. APHL, ASM, CAPHLD, etc.)

Serve as committee member for state and/or national PHL organizations

Membership/Committee Participation (e.g. CAPHLD, APHL, etc.)

Seminars (can obtain CEUs)

Webinars (can obtain CEUs)

Networking Events

Training Events (including PHL and non-PHL)

Published Journal Articles

Additional rotations, if applicable

Organizational Meetings/Events

Laboratory Rotations

**If you would like to provide any specifics about any activities that you participated in this quarter, please explain below.**

5. What is the level of interaction and training do you receive from your mentor?

Always (11 to 15 hours per week)

Usually (5 to 10 hours per week)

Sometimes (2-4 hours per week)

Rarely (1 to 2 hours per week)

Never (0 to 1 hours per week)

6. Are the meetings with your mentor effective, and are you tracking along with your laboratory director that the goals set in your training plan are being successfully completed?

Yes  
No

7. How would you rate the mentorship you are receiving from your laboratory director?

Very Poor  
Poor  
Average

Good  
Very Good

8. What is your expected timeline to complete the Fellowship program?

Less than 6 months  
6-12 months  
1 year  
2 years  
3 years  
More than 3 years

9. Please provide any additional comments about your overall progress in the program. If no further comments, please note "N/A".

#### Laboratory Director Quarterly Report for Fellow(s)

1. Based upon the summary sent by the LabAspire Program Manager noting the administrative training received by the Fellow, can you confirm that this training was performed?

Yes  
No

If the answer to Question #1 is "No", or if need to select additional administrative training completed this quarter, please answer Question # 2. If the answer to Question # 1 is yes, skip Question # 2.

2. Select any additional administrative trainings that the Fellow participated in this quarter:

Administration  
Biosafety and Security  
Effective Meetings  
Facilities Management  
General Management  
Information Technology  
Leadership and Supervision  
Marketing Management  
Non-Organization and Organizational Program Activities  
Operations Management  
Other Programs (e.g. Childhood lead poisoning)  
Personnel Management

Public Health Missions  
Quality Assurance Management  
Regulatory Compliance  
Resource Management

3. What areas of Technical Expertise/Interpretation did your Fellow gain experience in this quarter?

Microbiology  
Public Health Microbiology  
Epidemiology  
Surveillance Testing  
Validations  
Verifications

4. Has your Fellow participated in any of the following?

Attend/Present at Conferences (e.g. APHL, ASM, CAPHL, etc.)  
Serve as committee member for state and/or national PHL organizations  
Membership and Committee Participation  
Seminars/Webinars  
Networking Events  
Training Events  
Organizational Meetings and Events  
Laboratory Rotations

If you would like to elaborate on any of the above, please explain below.

5. Has your Fellow met any of the milestones for the LabAspire Fellowship Program plan set to date?

### **Orientation and Onboarding**

- Completed LabAspire Fellowship orientation and onboarding requirements
- Reviewed and signed the Fellowship Learning and Development Plan
- Completed all required HR, safety, and compliance trainings
- Established mentorship plan and identified primary and secondary mentors

### **Training and Competency Development**

- Completed initial laboratory management rotation (e.g., quality systems, safety, or operations)
- Participated in technical training in a state or local public health laboratory section

- Completed competency assessment in one or more core laboratory disciplines
- Demonstrated proficiency in biosafety, quality assurance, or laboratory informatics

### **Leadership and Management Skills**

- Attended LabAspire leadership workshop or webinar
- Led or co-led a team meeting, training, or project within the host laboratory
- Completed leadership self-assessment and set professional development goals
- Participated in management shadowing (e.g., with Laboratory Director or Section Chief)

### **Research, Quality, and Process Improvement**

- Initiated or completed a quality improvement or process evaluation project
- Presented project findings to laboratory leadership or peers
- Contributed to the development or revision of a standard operating procedure (SOP)
- Participated in a root cause analysis or corrective action review

### **Collaboration and Professional Networking**

- Attended CAPHLD Spring or Fall Institute
- Presented at a professional meeting or conference (poster/oral presentation)
- Joined a professional association or workgroup (e.g., APHL, CAPHLD Committee)
- Collaborated with other LabAspire Fellows or alumni on a project or presentation

### **Academic and Certification Preparation**

- Completed coursework toward MPH, DrPH, or related graduate degree requirement
- Met academic milestones related to ABMM or ABB eligibility pathways
- Submitted documentation for certification or licensure prerequisites
- Participated in exam preparation or mentorship sessions for board certification

### Program Deliverables and Reporting

- Submitted quarterly progress report on training milestones
- Updated Individual Development Plan (IDP) with mentor feedback
- Completed midpoint or end-of-year self-assessment
- Provided input or feedback for LabAspire program evaluation

If none, please explain below.

6. How well does your Fellow perform in the following areas. For less than "neutral" responses, please explain.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Utilizes strengths to fulfill goals/plans set					
Reception to constructive feedback					
Seek mentorship					
Positive interaction with staff and peers					

7. Rate your Fellow's overall likelihood of successfully completing the LabAspire Program?

Rate 1 to 5

8. Are there any issues with your Fellow completing the Program? If so, please explain. If none, note "N/A"

9. Can you provide specifics on your funding/budget requests?

10. When do you anticipate your Fellow using all the awarded funds? Please note the quarter and year of the program.

## APPENDIX 4. PROGRAM CALENDAR 2025

Date	Meeting topic / Event	Location / Email	Other Presenter	CAPHLD/ LabAspire Presenter
January 17, 2025	1. Presentation: Botulism and 2024 Foodborne Outbreak in California	Microsoft Teams Meeting Link		Jason Barash (CDPH)
March 21, 2025	2. Presentation: Use of Assistive AI in Parasitology Lab Workflow	Microsoft Teams Meeting Link	Tyler Rippey (Techcyte)	
March 24-27, 2025	APHL ID Conference	Pasadena, CA		
March 31, 2025	Quarterly Progress Report Q1 due	CAPHLD.labaspire@gmail.com and Shantelle.Lucas@cdph.ca.gov		
April 3, 2025	CAPHLD Spring Meeting	CDPH, Richmond, CA		
April 29, 2025	ABB Exam	Las Vegas, NV		
May 5-8, 2025	APHL Annual Conference	Portland, OR		
May 16, 2025	3 Presentation: TBD	Microsoft Teams Meeting Link		
June 19-23, 2025	ASM Microbe Meeting	Los Angeles, CA		
June 30, 2025	Quarterly Progress Report Q2 due	CAPHLD.labaspire@gmail.com and Shantelle.Lucas@cdph.ca.gov		
July 18, 2025	4. Presentation: Laboratory developed test-Verification of C. auris Real-Time PCR on the ABI 7500 Fast Dx	Microsoft Teams Meeting Link		Polen Sean (Sonoma)
September 26, 2025	5. Presentation: NSYMM PHL-topic TBD	Microsoft Teams Meeting Link		Rosa Cuevas (NSYMM)
September 29-	CAPHLD Annual Institute	San Diego, CA		

October 1, 2025				
September 30, 2025	Quarterly Progress Report Q3 due	CAPHLD.labaspire@gmail.com and Shantelle.Lucas@cdph.ca.gov		
October 25, 2025	ABB exam	San Antonio, TX		
November 14, 2025	6. Presentation: TBD	Microsoft Teams Meeting Link		
December 19, 2025	Quarterly Progress Report Q4 due	CAPHLD.labaspire@gmail.com and Shantelle.Lucas@cdph.ca.gov		

## **APPENDIX 5. PROGRAM CONTACTS**

Shantelle Lucas, Ph.D., HCLD (ABB),  
Program Manager  
California Department of Public Health  
Phone: (650) 580-9538  
Email: shantelle.lucas@cdph.ca.gov

Jeff Schapiro, MD, D(ABMM)  
Acting Chief, Laboratory Field Services Branch  
Center for Laboratory Sciences  
California Department of Public Health  
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State Public Health Laboratory Director  
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Denise Lopez, DrPH, MS, TS/HCLD (ABB)  
CAPHLD President  
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Jeremy Corrigan, DrPH, HCLD/TS (ABB)  
CAPHLD President-Elect  
Director, San Diego County Public Health Laboratory  
Phone: N/A  
Email: Jeremy.Corrigan@sdcounty.ca.gov

## APPENDIX 6. LABASPIRE COMMITTEE GENERAL ACTIVITIES

### LabAspire Committee Members 2025-2026

CDPH	Role	CAPHLD	Role
Shantelle Lucas	Program Manager	Lydia Mikhail	Chair
Hamida Nusrat	Program Coordinator	Donna Ferguson	
TBD	CLS SME	Jessica Valdez	
Dolapo Afolayan	LFS SME	Kristina Hsieh	
Amanda Moe	Contract analyst	Harmeet Kaur	
Kate Weis	Contract analyst	Godfred Masinde	
		TBD	LabAspire Fellow

### LabAspire Committee (LAC) Governance Structure

**Purpose:** The purpose of the document is to define the structure, governance, and roles/responsibilities of the LAC members: reviewing applications, handling specific tasks/focus areas, ongoing concerns, special projects, strategic initiatives, serving as liaison between partners and agencies, etc.

**Meeting Cadence:** The LabAspire Committee must meet at least quarterly, but the current scheduled cadence is monthly meetings.

**Executive Committee, the LAC Reports to:** California Public Health Laboratory Director (CAPHLD), Executive Committee (EC)

**Stakeholders:** California Department of Public Health - Center for Laboratory Services (CDPH CLS)

#### **Committee Members**

- Infectious Disease Laboratories Division Chief
- Program Manager- Chair
- Program Coordinator-Vice Chair/Secretary
- Chief, California Department of Public Health Laboratory Fields Services
  - Provide regulatory updates on requirements for serving as a California Public Health Laboratory Director
- State Public Health Laboratory Director
- Laboratory Directors/Selection Committee (assist with committee goals and objectives)
  - PhD representative
  - DrPH representative
  - CAPHLD EC representative, when needed

#### **Roles and Responsibilities**

##### **Chair-LabAspire Program Manager**

- Lead meetings/ move meetings forward (follow up on action items)
  - Establish and maintain appropriate timetables for the accomplishment of projects, tasks, etc.
- Ensure that policies and priorities are clear and are on track.

- Act as the main spokesperson/ representative for the group (e.g., provide committee reports to CAPHLD EC, CHEAC, and CCLHO, etc.). Serve as the main channel of communication and deliver committee reports.
  - Confer with LabAspire Executive Committee liaison on an ongoing basis between meetings
  - Communicate with CAPHLD members regarding ongoing committee business
- Take urgent action (not decision-making, unless authorized) between meetings
- Supervise staff and support LAC committee members.
- Initial reviewer of New and Renewal LabAspire applications
- Manage the development and updating of the curriculum and documents/records
- Assign training materials
- Develop, update, review, and approve LabAspire Training Manual
- Assist in establishing committee goals and objectives
- Other duties as assigned and/or discussed
- Draft Agenda and Meeting Minutes

**Vice Chair- LabAspire Program Coordinator**

- Deputy to the Chair
- Draft Agenda and Meeting Minutes
- Coordinate Bimonthly Trainings
- Assist with completing required planning documentation in a timely manner.
- Assist with maintaining and updating program files and documents
- Communicate with LabAspire Fellows and host labs for progress reports, projects, LabAspire program matriculation certificates, grant administration, questions, and concerns
- Relay information to appropriate members of CDPH, CAPHLD, and other organizations
- Contribute appropriate agenda items to monthly CAPHLD and CCLHO meetings
- Attend CDPH, CAPHLD, and CCLHO meetings as appropriate
- Coordinate the update of the CAPHLD LabAspire web page
- Assist Program Manager as needed

**Secretary-LabAspire Program Coordinator**

- Recording the decision for the committee
- Ensuring agendas, minutes, documents, action items, etc. sent out in advance of the meeting, online meeting request is sent
- Dealing with Correspondence on behalf of the group when needed

### **Shared Roles & Responsibilities of LAC Committee Members**

- Read and understand the agenda
- Act on agenda items
- Appoint /Recommend new members
- Support the action/efforts of the overall committee
- Make decisions as a collective group
- Review policies and procedures
- Review and approve LabAspire training program applications after the Program Manager's initial review (Overseeing host laboratory and Fellow selection)
  - Recommend LabAspire Fellow appointment and/or re-appointments
  - Recommend host laboratory designations
- Review of program evaluations.
- Assist in developing training criteria and materials
- Act as a liaison between the California Emergency Preparedness Office to facilitate funding
- Assist in planning networking events and activities for Fellows as needed.

## Scorecards/Rubrics for Reviewing and Approving Host Laboratory and Fellow Applications

**Purpose:** (1) Reduce bias, enhance objectivity, and increase transparency; (2) Serve as an official record; and (3) Easier communication and consistency when scoring LabAspire Host Laboratory and Fellow applications.

**Scoring: Each item has an assigned value: 0 to 1**

- **Scoring Definitions\*:**
  - **High- 1**
  - **Medium - 0.5**
  - **Low - 0**
  - **\* This is the scoring that will be used for each criterion, except where noted in the scorecard in parentheses for the indicated selection criteria.**
- **The following selection criteria is weighted more due to its importance for meeting state and federal requirements:**
  - California PHM certification
  - Doctoral Degree
    - Degree is in a laboratory science
  - Number of Years of PHL Experience
  - Number of Years of PHL Supervisory Experience

Below is a summary of Board Certification Requirements for the American Board of Bioanalysis (ABB) and American Board of Medical Microbiology (ABMM). These requirements should be referenced when determining if candidates who are applying to the LabAspire program with a doctoral degree meet the requirements so that they can sit for the ABB or ABMM exams. The LAC CANNOT make the ultimate decision on whether the candidate, if admitted as a Fellow, can take the exam. This is up to the ABB and ABMM review boards. **NOTE:** Board requirements will be updated as necessary.

## Board Examination Requirements

Criteria / Requirement	ABB HCLD	ABMM	CLIA	LFS
Degree Requirements*	Ph.D. or Doctor of Science from accredited institution in chemical, biological, clinical medical laboratory science, or medical technology with 32 hrs. chemistry/biology; OR DCLS or other clinical/professional doctorate (must have 16 semester hours of doctoral-level work with approved thesis project in areas related to laboratory testing for diagnosis, prevention, and treatment of disease).	<p>Doctoral degree (Ph.D. or D.Sc) in microbiology or a related science, or (in some cases) other doctorates (MD, DO, DrPH, DDS) if additional training/experience is approved. DCLS and PharmD are not acceptable.</p> <p>Must meet one of three eligibility plans:</p> <p><b>Plan I</b> – doctorate + ≥3 yrs full-time experience;</p> <p><b>Plan II</b> – doctorate + 2 yrs postgraduate training in a CPEP-approved program;</p> <p><b>Plan III</b> – doctorate + completion of an ACGME-accredited Fellowship in Medical Microbiology or Canadian equivalent.</p>	MD, DO, or doctoral degree in a relevant lab science, plus required laboratory training and specified years of experience depending on degree type. <b>CLIA does not accept DVM.</b>	<p>For California: PhD, DrPH, DCLS, or MD/DO licensed in CA with relevant laboratory training &amp; certification.</p> <p>(PHLD details: Same as ABB HCLD criteria: Ph.D. or Doctor of Science in chem/biol/clinical lab science or med tech with 32 hrs. Chemistry/Biology; OR DCLS or other professional doctorate (must have 16 semester hours of doctoral-level work with approved thesis project in lab testing).</p> <p>PHLD details: Contingent on evidence that the candidate's doctorate includes clinically significant</p>

				laboratory research and meets the experience/training requirements.)
Clinical Laboratory Experience	4 yrs in a High Complexity Laboratory within 10 yrs of application; 2 yrs must be immediately prior to application.	Minimum 3 yrs full-time experience in clinical/public health microbiology after doctorate (Plan I). For Plan II and III, experience/training as specified above. All training/experience must be after doctorate.	Varies by degree; typically, 2-4 yrs in high-complexity lab setting.	LFS may consider experience depending on degree and role. <a href="#">Must have some Public Health Laboratory experience.</a>
Public Health Laboratory Experience	≥1 yr (if seeking PHLD).	Not explicitly specified as separate in ABMM beyond clinical/public health microbiology experience.	N/A	4 yrs
Supervisory / Management Experience	2 yrs in a supervisory role.	Emphasizes experience relevant to clinical/public health microbiology including supervisory/leadership functions. No fixed duration required.	2 yrs supervisory experience typically required for director roles.	Not specifically stated- <a href="#">Title 17 Section 1302</a>
Laboratory Training	Doctoral-level thesis or post-doctoral research in	Plan II/III: 2 yrs in CPEP program or completion of ACGME/CCM/RC PSC training in	2 years of experience <a href="#">42 CFR 493.</a>	6 months PHM or 12 months post-doc

	laboratory science.	medical microbiology. All training must be post-doctorate.		
Continuing Education (CEUs)	20 CEUs recommended covering laboratory director responsibilities plus 12 annual CEUs	Diplomates must obtain 150 contact hours of continuing education every 3 years to maintain active status.	20 CEUs recommended covering laboratory director responsibilities	N/A
Board Certification	ABB HCLD or PHLD	ABMM	ABB or ABMM	ABB or ABMM
Board Exam Acceptance Criteria	Contingent on evidence that the candidate's doctorate is in laboratory science (emphasis on research with clinical significance, not just courses taken).	Applicants must meet criteria under one of the three Plans. All training and experience must be post-doctorate. References must document relevant experience.	Must hold board certification from a CLIA-recognized board; exam eligibility varies by board.	Same as CLIA plus CA licensure/training requirements.
Location of Experience	Must have clinical laboratory experience from U.S. (California or other states); international laboratory experience not accepted.	For degrees outside U.S./Canada: must be evaluated equivalent by WES; training/experience must relate to U.S./Canada accreditation standards.	Experience must be in U.S. CLIA-certified laboratories or equivalent.	Must meet California licensure/experience requirements.  <b>PHLD details:</b> Must have U.S. (California or other states) lab experience; international lab experience <b>not</b> accepted.

\***PHLD details:** Same as ABB HCLD criteria: Ph.D. or Doctor of Science in chem/biol/clinical lab science or med tech with 32 hrs. Chemistry/Biology; OR DCLS or other professional doctorate (must have 16 semester hours of doctoral-level

work with an approved thesis project in lab testing). [Contingent on evidence that the candidate's doctorate includes clinically significant laboratory research and meets the experience/training requirements.](#)

Once the admitted Fellow has successfully matriculated through the LabAspire program and passed either the ABB and/or ABMM, the graduated Fellow can apply with Laboratory Fields Services to become a CA PHL Director. Below are the Laboratory Field Services (LFS) requirements for being a California PHL Director

### **LABORATORY FIELDS SERVICES (LFS)**

- National Board Laboratory Director Certification
  - ABB
  - ABMM
- Four years of Public Health Laboratory experience **AFTER** obtaining the California PHM Certificate
  - Two of the years must be supervisory
  - **NOTE**-Clinical laboratory experience **may** count towards the total four years needed. LFS will review on a case-by-case basis by completing the Letter of Experience for Public Health Microbiologist Certification. **To request a copy of the Letter of Experience for Public Health Microbiologist Certification, please email the LabAspire Program Manager using the contact information noted in Appendix Five.**
- A Ph.D. must be related to clinical diagnostic work
- Must have clinical/public health laboratory experience from CA or other states. Experience cannot be gained from an international laboratory. – Ph.D. must be related to clinical diagnostic work

**Reviewer:**

**Date:**

<b>Name of Topics</b>	<b>Candidate 1</b>	<b>Candidate 2</b>	<b>Candidate 3</b>	<b>Candidate 4</b>	<b>Candidate 5</b>
<b>Public Health Microbiologist Certification Date</b>					
<b>Transcripts/Equivalency CV</b>					
<b>Education (Highest Degree Obtained)</b>					
<b>Degree in laboratory science*</b>					
<b>Other Licenses/Certifications</b>					
<b>Host Laboratory Letter</b>					
<b>Currently employed at PHL</b>					
<b>Years of Public Health Laboratory Experience</b>					
<b>Years of Clinical Laboratory Experience</b>					
<b>Years of Diagnostic Laboratory Experience</b>					
<b>Years of Public Health Laboratory Supervisory Experience</b>					
<b>Years of Clinical Laboratory Supervisory Experience</b>					
<b>Time to Eligibility (Training and Education Needed) to Qualify for Board Exam</b>					
<b>Board Exam Progress (0,1,2)</b>					
<b>Time to Eligibility (Training and Education needed) to Become CA PHL Director</b>					
<b>Completed CPEP/Other Training Programs</b>					
<b>Meets CDPH PHLD Requirement (4 years of PHL Experience)</b>					

<b>Quarterly reports # (if already enrolled)</b>					
<b>Meets CLIA HCLD Requirements (Ph.D.) + Board Certification</b>					
<b>Total Score</b>					

**\*National Board Requirement**

**Reviewer:**

**Date:**

<b>Name of Topics</b>	<b>Host Laborator y 1</b>	<b>Host Laborator y 2</b>	<b>Host Laborator y 3</b>	<b>Host Laborator y 4</b>	<b>Host Laborator y 5</b>
<b>CLIA High Complexity CA PHL*</b>					
<b>LD/Mentor LD is PHLD</b>					
<b>LD full-time or part-time</b>					
<b>LD # of years of experience</b>					
<b>LD % of time to commit to program</b>					
<b>Lab history of training successful LabAspire Fellows</b>					
<b>LD years to retirement</b>					
<b>Available AD position or assigned to Fellow</b>					
<b>Supervisor position available or assigned to Fellow</b>					
<b>Provided LabAspire</b>					

<b>Program Training Plan (score out of 10)</b>					
<b>Salary/stipend requested</b>					
<b>Retention Plan (score out of 5 )</b>					
<b>How much salary/stipend requested</b>					
<b>Ability to provide partial funding support for Fellow (2025 to 2027)</b>					
<b>Funding to Support Fellow after 2027</b>					
<b>Other/Notes</b>					
<b>Total Score</b>					

- For borderline candidates, in whom it is not clear if he/she would meet the requirements to take board exams, the candidate/provisional Fellow must apply to take one of the ABB Technical Supervisor exams within the first year of participating in the program. The ABB board will determine if they meet the requirements to take the exam.
- If all candidates have the same score, the Program Manager needs to conduct interviews to be able to rank candidates in instances when the application is contingent on funding and there is not enough funding.







## **APPENDIX 7. APPLICATION FORM FOR FELLOWS**

A. Complete the following demographic information:

1. Name of applicant:
2. Email:
3. Telephone number(s):
4. Home Address:
5. Current employer - facility name and address:
6. Current position:
7. Number of years in current position:
8. Professional degrees and years completed:
9. Sponsoring Public Health Laboratory name:
10. Names and contact information for three references:

B. Submit the following items as electronic documents:

1. PHM certification (required)
2. Official transcripts showing degrees completed (required)
3. C.V. (required)
4. Other professional licenses and certifications, if applicable
5. Letter of recommendation from your sponsoring laboratory, if applicable

C. What experience or other qualifications do you need to complete to meet CLIA and CDPH requirements to become a Public Health Laboratory Director in California?

D. Personal essay: In one page or less, describe your interest in participating in LabAspire, your relationship to your sponsoring laboratory, and the characteristics and experience that make you strongly qualified to work as Assistant Director in a Public Health Laboratory.

## APPENDIX 8. APPLICATION FORM FOR HOST LABORATORIES

New application

Renewal

A. Provide the following demographic information (for information purposes, not scored):

1. Name of Public Health Laboratory:
2. Size of population served:
3. Number of employees in your Public Health Laboratory:
4. Total number of tests your Public Health Laboratory performs per year (including CLIA, ELAP, animal, food, other):
5. Laboratory networks your Public Health Laboratory participates in (e.g., LRN, PulseNet, FoodNet, Measles, Zika, COVIDNet, CaliciNet, HAI, mpox, etc.):

B. Complete the following LabAspire-specific information:

1. Indicate the status of the current Public Health Laboratory Director (mark all that apply)

Full-time       Part-time \_\_\_ hours/week       Contract  
\_\_\_ hours/week

Retired       Temporary       Planning to retire in \_\_\_\_\_  
years

Simultaneously directing another laboratory (name):

2. Does your Public Health Laboratory currently have an:

i. Assistant Director position       Yes, filled       Yes, open       No

ii. Assistant Director class specification  Yes  No

C. Submit scans of the following items:

1. CLIA certificate, including a list of laboratory specialties/subspecialties

2. ELAP certificate (if applicable), including Fields of Testing  
N/A
3. A letter of support from your Local Health Department (e.g., Health Officer or administrator) supporting your Public Health Laboratory's participation in the LabAspire program. **A separate letter is required for each Fellow in case more than one Fellow is sponsored from your laboratory.**

D. Describe in 2-4 sentences your Public Health Laboratory's need or interest in participating in LabAspire:

E. Outline the training plan and training schedule for your LabAspire Fellowship for the next 1-2 years, indicating which subjects will be covered and specifying where the trainings will take place, in your laboratory or another location (see *Appendix 1 of Program Manual: LabAspire Curriculum*; may attach additional pages as needed):

F. Does your Public Health Laboratory have any specific candidates you are planning to sponsor for LabAspire Fellowships? Yes Not yet selected

1. Candidate name(s):
2. Number of years, type of experience, and exams this candidate needs to meet the CLIA and CDPH Public Health Lab Director requirements:

G. Title of the supervisory position that the LabAspire candidate will be placed in; or title of current supervisory position if candidate will remain in that position:

\_\_\_\_\_ **Please include with the application the title position's job description/duty statement and organizational chart.**

*IMPORTANT: A supervisory position is required for all LabAspire Fellows to meet board certification exam requirements.*

1. If a specific candidate is being sponsored, describe in 2-4 sentences what characteristics make this candidate strongly qualified to work as Assistant Director, Manager, or Supervisor in your laboratory. If this is a renewal, describe your candidate's experience and achievements during their previous year in the LabAspire Training Program.

H. Describe in 1-3 sentences the intended succession plan in your laboratory after the LabAspire Fellowship is completed, what position the candidate will be placed in, and what they will do. If it is not intended for the candidate to continue working in your laboratory, describe the plan for their placement in another laboratory.

- I. Please provide your Public Health Laboratory LabAspire training budget in the table below, **with deliverables/line items broken down for each fiscal year**. Providing a detailed Excel spreadsheet will help the committee clearly understand how the requested funds will be allocated. Consider the salary range needed for this position in your laboratory and indicate any items that will be paid with internal funding. Financial support from the Local Public Health Department is not required. Still, it may be considered when awarding Fellowships, especially if the timeline for completing PHLD requirements or degree is expected to be longer than the AB107 funding is available.

Is your laboratory able to receive alternative funds that your laboratory intends to use to support your prospective LabAspire candidate? If so, can you please list the types of alternative funding sources you can receive for the Fellow?

<b>FY 2024-2027 HERO (AB) LabAspire Budget</b>
--

<b>Entity Name:</b>	
<b>Allocation requested:</b>	<b>\$</b>
<b>Indirect costs (LHD administrative costs)</b>	<b>%</b>

	<b>BUDGET</b>
<b>Budget Category</b>	<b>Total</b>
Personnel – Assistant Director salary	\$
Personnel – fringe (e.g. benefits or FICA 7.65%)	\$
<b>Subtotal Personnel</b>	<b>\$</b>
Reference books, study materials	\$
In State Travel to CAPHLD or other meetings	\$
Out of State Travel to scientific meetings	\$
Other Training Costs	\$
<b>Total Direct</b>	<b>\$</b>
<b>Indirect Cost (\$)</b>	<b>\$</b>
<b>Total Expenditures</b>	<b>\$</b>

## APPENDIX 9. Funding

### Public Health Equity and Readiness Opportunity (HERO) Initiative

- **Distribution**
  - State Budget Acts AB179, AB102, & AB 107
  - Each AB provides \$3.2 mil General Funds over 3 years
  - AB 179: 2022 to 2025- \$2.2M distributed to 9 local PHLs for 12 Fellows
  - AB 102: 2023 to 2026- \$3.2M awarded to 4 local PHLs for 5 Fellows (1 continuing from AB 179)
  - AB107: 2024 to 2027- currently requesting applications
- **Contacts for more information**
  - Amanda Moe: [Amanda.Moe@cdph.ca.gov](mailto:Amanda.Moe@cdph.ca.gov)
  - Kate Weis: [Kate.Weis@cdph.ca.gov](mailto:Kate.Weis@cdph.ca.gov)
  - Wil Velasco: [Wilfred.Velasco@cdph.ca.gov](mailto:Wilfred.Velasco@cdph.ca.gov)
    - Handles contracts
- **Questions and Answers**
- Q: Can HERO funding be used to supplant salaries of assistant lab directors, managers, and supervisors?
- A: If funding will be used to support a **new** position, then yes; some grants (such as PH Workforce) do not allow funds to be used to supplant salaries – **ask Amanda & Wil to verify and include in their funding guidelines**; county policies regarding augmenting salaries will vary; county policies may also vary on whether LA Fellows can be paid for training during normal work hours.
- Q: Can HERO funding be used to pay for salaries of Fellows pursuing only a master's degree?
- A: No
- Q: Can local PHLs request additional funding beyond \$45K?
- A: Yes. They need to provide supporting justification and documentation
- **PHEP (PUBLIC HEALTH EMERGENCY PREPAREDNESS)**
  - Was around \$406,500 K per year 2017-2019
  - 5-year cycle (ended 2019)
  - After HERO funding ends, we will need to identify another funding source. A long-term solution is to get LabAspire permanently into the state budget.

## APPENDIX 10. Requirements for Laboratory Director

## Code of Federal Regulations

- **42 CFR §493.1443 Standard; Laboratory director qualifications.**
  - The laboratory director must be qualified to manage and direct the laboratory personnel and performance of high complexity tests and must be eligible to be an operator of a laboratory within the requirements of subpart R.
    - (a) The laboratory director must possess a current license as a laboratory director issued by the State in which the laboratory is located, if such licensing is required; and
    - (b) The laboratory director must—
      - (3) Hold an earned doctoral degree in a chemical, physical, biological, or clinical laboratory science from an accredited institution and—
        - (i) Be certified and continue to be certified by a board approved by HHS; or
        - (ii) Before February 24, 2003, must have served or be serving as a director of a laboratory performing high complexity testing and must have at least—
          - (A) Two years of laboratory training or experience, or both; and
          - (B) Two years of laboratory experience directing or supervising high complexity testing.
      - (4) Be serving as a laboratory director and must have previously qualified or could have qualified as a laboratory director under regulations at 42 CFR 493.1415, published March 14, 1990 at 55 FR 9538, on or before February 28, 1992; or
      - (5) On or before February 28, 1992, be qualified under State law to direct a laboratory in the State in which the laboratory is located;

### **Certification Boards (09/10/2024)**

#### Certification Boards for Laboratory Directors of High Complexity Testing

The qualification for a laboratory director of high complexity testing at 42 CFR 493.1443(b)(3)(i) is that the laboratory director must hold an earned doctoral degree in a chemical, physical, biological or clinical laboratory science from an accredited institution and be certified and continue to be certified by a board approved by HHS. The current approved boards are the following:

1. ABB – American Board of Bioanalysis

2. ABB public health microbiology certification
3. ABCC – American Board of Clinical Chemistry
4. ABFT – American Board of Forensic Toxicology (limited to individuals with a doctoral degree with Fellow status) \*
5. ABMGG – American Board of Medical Genetics and Genomics (formerly known as American Board of
6. Medical Genetics (ABMG))
7. ABMLI – American Board of Medical Laboratory Immunology (no longer accepting new exam applicants)
8. ABMM – American Board of Medical Microbiology
9. ACHI -American College of Histocompatibility and Immunogenetics (formerly known as American Board of Histocompatibility and Immunogenetics (ABHI))
10. NRCC – National Registry of Certified Chemists (limited to individuals with a doctoral degree) \*
11. DMLI – Diplomate in Medical Laboratory Immunology (ASCP Board of Certification)

\* These boards certify non-doctoral individuals also.

<https://www.cms.gov/medicare/quality/clinical-laboratory-improvement-amendments/certification-boards>

## **APPENDIX 11. Frequently Asked Questions (FAQs)**

## **LabAspire Workforce Training Grant Application:**

1. What are the requirements for an LHJ to apply for funding for the Public Health Laboratory (PHL) workforce training program, such as the LabAspire PHLD Fellowship Program?

Local Health Jurisdictions (LHJs) seeking funding for participation in the Public Health Laboratory (PHL) Workforce Training Program, such as the LabAspire Public Health Laboratory Director (PHLD) Fellowship Program, must meet several eligibility and programmatic requirements established by the California Department of Public Health (CDPH) and its partners. Eligible applicants must operate a public health laboratory or have a formal affiliation with a laboratory certified under the CLIA regulations and be capable of serving as a host site for training. The host laboratory must demonstrate the capacity, staffing, and resources necessary to provide a comprehensive training experience that meets program competencies and regulatory requirements for future Public Health Laboratory Directors.

Each LHJ must develop and submit a detailed **training and mentorship plan** that outlines how the Fellowship will be structured, supervised, and evaluated. The plan should identify qualified supervisory and mentorship personnel, describe the training schedule and rotations, and explain how the laboratory environment will support the Fellow's progression toward PHLD or equivalent certification. The proposed training plan should also align with state and federal standards for public health laboratory practice, including applicable sections of **Title 17, California Code of Regulations**, that govern laboratory personnel qualifications and training.

Applications must include information on the **proposed Fellow(s)**, including curriculum vitae, academic transcripts, and documentation of eligibility for the specific Fellowship track (e.g., doctoral-level or Public Health Microbiologist [PHM] pathway). Fellows must meet minimum educational and professional criteria to ensure readiness for advanced public health laboratory leadership training. Where applicable, documentation showing eligibility to pursue certification through the **American Board of Bioanalysis (ABB)**, **American Board of Medical Microbiology (ABMM)**, or the California Public Health Laboratory Director licensure pathway should be included.

Each application must also include a **budget and justification** that clearly describes how funds will be allocated. Allowable expenses typically include trainee stipends or salaries, tuition or course fees, conference travel, training materials, and limited administrative costs. The budget must align with the funding announcement's fiscal guidelines and should include appropriate

authorization from the LHJ, such as a Board of Supervisors' approval or other documentation of authority to receive and manage grant funds.

LHJs must demonstrate commitment and administrative readiness to manage the award, including compliance with all reporting, fiscal accountability, and program performance requirements specified in the grant agreement. This includes submission of progress reports, documentation of Fellow milestones and competencies achieved, and timely submission of expenditure and fiscal reports. The LHJ must also ensure that training activities promote workforce diversity, equity, and inclusion consistent with CDPH workforce development priorities and the overarching goals of the LabAspire Program.

Finally, the host laboratory must submit evidence of institutional commitment to the Fellowship's success, including letters of support from laboratory leadership, collaborating academic institutions, or partner agencies, as applicable. All applications must be submitted by the stated deadline using the official submission process outlined in the funding announcement.

**2. What expenses are allowable during the Fellowship?**

LabAspire expenses must fulfill the intent of the funding for professional development, educational degree, and board certification to meet state and national public health lab director qualifications. Allowed expenses may include but are not limited to salary compensation; education (tuition for MPH or DrPH/PhD as applicable); training supplies (laptops, office supplies) and dissertation research supplies (media/reagents); educational resources (books, online learning subscriptions such as LMU, MTS or Quizlet; and registration fees, travel, lodging and per diem for professional conferences, academic programs, national and state board exams, laboratory trainings and peer-to-peer laboratory visits that directly relate to the Fellow's training plan and/or Laboratory Director qualifications. LabAspire funding is not meant to be used for expenses related to laboratory testing, research, events, or personal items that do not fulfill an academic requirement. In order to be eligible for funding, individual Fellows and trainers must be listed in the LabAspire budget.

**3. Who approves the expenses?**

All LabAspire expenses are paid in arrears, e.g., the LHJ pays for the item and then submits invoices to CDPH for reimbursement. Expenses incurred by the LHJ PHL must follow LHJ guidelines to be reimbursable. Some LHJs may require additional information and/or verification from CDPH or the LabAspire Committee before approving the expenses. Certain expenses, such as out-of-state travel, must be approved by CDPH in advance of the activity; if these types of expenses are anticipated, please notify the LabAspire Program Manager as soon as possible. Once the LHJ has incurred the expense, the LHJ PHLD or fiscal analyst forwards the invoices to

CDPH for reimbursement. LHJs should invoice CDPH at least quarterly and complete all invoicing within 90 days of the end of the funding allocation.

4. What type of agreement is required for these PHL workforce training grants?  
The main agreement is a contract between CDPH and the LHJ PHL, which includes a work plan and budget. In addition, the PHL hosting the LabAspire Fellow must submit the 'Host Application' packet along with a letter of support from the Health Officer or Administrator from the local Health Department as part of the agreement for the workforce management training grant. In the Host Application, the PHL attests that it will ensure all the necessary provisions for the Fellow to complete the training requirements as set forth by the academic institution (if applicable), supervisory position, completion of training requirements per LFS/CAPHLD committees, and submission of periodic progress reports.
5. How are the expenses paid?  
Reimbursement of expenses is through the local county's fiscal department. CDPH does not reimburse Fellows directly. If Fellows incur personal expenses, they will need to request reimbursement through their LHJ. It's important to understand your county's reimbursement process to ensure that expenses can be reimbursed in a timely manner.

### **LabAspire PHLD Training Fellowship:**

1. Why is the LabAspire Fellowship needed?  
The LabAspire Fellowship Program is needed on an ongoing basis to provide sustainability and continuation of public health laboratory management workforce development. Per CLIA guidelines, a public health laboratory in the state of California cannot function without a qualified and board-certified Public Health Laboratory Director. In California, the Public Health Laboratory Director (PHLD) must be a certified Public Health Microbiologist (PHM) per California Code of Regulations (17 CCR § 1302) and must meet federal CLIA regulations (42 CFR § 493.1443).  
An LHJ public health laboratory may have a number of the following reasons for requesting funding for workforce development through the LabAspire Fellowship Program:
  - a. Lack of a full-time public health laboratory director running the lab.
  - b. Succession planning for the close-to-retirement current lab director.
  - c. Career advancement for qualified technical or general supervisors.
  - d. Planning for future expansion of the public health laboratory and/or testing menu.
2. Why does a local PHL need to host a LabAspire Fellow?  
The local PHL should host a LabAspire Fellow to maintain the sustainability of the PHL management workforce. The PHLD serves as the mentor and liaison between the LabAspire Fellow and LHJ leadership. As mentioned in

Question# 1 under 'LabAspire Workforce Training Grant Application FAQs', the local PHL may have any of the following reasons to participate in workforce development through the LabAspire Fellowship Program:

- a. Lack of a full-time public health laboratory director running the lab.
- b. Succession planning for the close-to-retirement current lab director.
- c. Career advancement for qualified technical or general supervisors.
- d. Planning for future expansion of the public health laboratory and/or testing menu.

3. We would like to host a LabAspire Fellow, but we don't have a full-time Public Health Lab Director (PHLD). What are the options?

The Host Laboratory can identify a part-time/interim PHLD, a retired PHLD, or a PHLD from a different PHL to mentor the LabAspire Fellow.

4. What are the prerequisites to be eligible for the LabAspire Fellowship?

LabAspire Fellowship is open to certified Public Health Microbiologists employed in a high-complexity California Public Health Laboratory with any of the following combinations of education and experience:

- Currently working as a Public Health Laboratory Assistant Director, Manager, or Supervisor;
- Currently working as Public Health Laboratory line staff with two or more years of high-complexity laboratory testing experience; and/or
- Holding a doctoral degree in a scientific discipline related to medical microbiology or public health.

LabAspire Fellowship is also open to candidates with a DrPH or a PhD in medical microbiology or a related field employed in a high-complexity California Public Health Laboratory; those candidates MUST attain the PHM certification WITHIN THE FIRST YEAR OF FELLOWSHIP.

5. Which degree programs are currently eligible for LabAspire funding?

Currently, the only online DrPH graduate program meeting the national board certification requirements is the University of South Florida ([Overview | USE Health](#)) DrPH program in 'Public Health and Clinical Laboratory Science and Practice'.

There are a variety of online MPH programs, such as those offered by UC Berkeley ([Online MPH Programs | University of California, Berkeley](#)), that will meet the requirements for the MPH prerequisite for the DrPH.

Since online and in-person graduate programs vary significantly in their compatibility with PHLD requirements, approval of any other programs will be on a case-by-case basis by the LabAspire Committee.

LabAspire applicants are responsible for consulting with their Host Laboratory, the LabAspire Committee, and LFS to ensure that their graduate coursework and projects apply to federal and state Laboratory Director requirements and are

compatible with PHL employment and supervisory experience requirements. For in-person programs, careful consideration of in-person course attendance requirements and the development of a well-defined thesis project with an achievable timeline are required and must be approved by both the LabAspire Committee and the LHJ.

**6. Why is the PHM certification a necessary qualification for LabAspire applicants?**

The California Code of Regulations (17 CCR § 1302) currently requires that a Public Health Laboratory Director (PHLD) MUST be a certified Public Health Microbiologist (PHM) with 4 YEARS of Public Health Laboratory experience satisfactory to the California Department of Public Health Laboratory Field Services Branch. PHM certification is required for laboratory experience in California to count as experience towards the PHLD requirement; experience before PHM certification is very rarely applicable. In addition to the state regulatory requirement, it is important that LabAspire Fellows are PHM certified because PHM training provides important expertise in directly applicable fields of public health microbiology including bacteriology, parasitology, virology, mycology, and serology. PHM training and work experience provide essential knowledge and understanding of PHL testing and reporting protocols. A strong background and work experience in public health microbiology are key factors in gaining the confidence and credibility to effectively direct a Public Health Laboratory.

**7. Why is a supervisory position required for all the LabAspire Fellows?**

A supervisory position is required for all LabAspire Fellows to meet national requirements. A LabAspire Fellow needs to complete a minimum of TWO years of supervisory experience, either in the role of a 'Supervisor' or 'Assistant Lab Director', to meet the qualifications for federal CLIA regulations 42 CFR § 493.1443 and the American Board of Bioanalysts (ABB) exam for HCLD or PHLD. A minimum of THREE years of supervisory experience is required to meet the qualifications for the American Board of Medical Microbiology exam for D(ABMM). Since 2017, no individual LabAspire funding source has exceeded 3 3-year duration; therefore, the supervisory position is required to take effect immediately with the implementation of award funding.

**8. Who approves or checks on the performance of a LabAspire Fellow during the training program?**

The Host Lab Director or mentor, LabAspire Program Manager and Program Coordinator, and members of the LabAspire Committee approve/check on the performance of a LabAspire Fellow during different phases of the training. The Host Lab Director or on-site mentor is responsible for day-to-day training and monitoring, providing ongoing feedback, and completing the LabAspire quarterly progress reports. The LabAspire Committee reviews the quarterly

progress reports to track training progress and the accomplishment of required milestones.

9. What are the requirements to complete the LabAspire Fellowship?

There are five basic requirements for successful completion of the LabAspire Fellowship:

- a. Attaining a doctoral degree (DrPH or PhD)
- b. Attaining PHM certification (if not already certified) in the first year of Fellowship
- c. Attaining two or more years of PHL supervisory experience
- d. Passing a national board exam (ABB PHLD or HCLD, or ABMM)
- e. Achieving California Laboratory Field Services approval as a California PHLD.

10. How much time does it take to complete the LabAspire Fellowship?

The amount of time to complete a LabAspire Fellowship depends on the existing qualifications of the Fellow at the time of acceptance into the Program. Typical LabAspire Fellowships range between 3-5 years. Candidates with a doctoral degree and PHM certification often qualify for board exams more quickly than candidates who are working towards MPH or DrPH degrees.

11. Why do LabAspire Fellows need to travel?

It is imperative that LabAspire Fellows be able to attend conferences and off-site trainings for professional development to enhance their laboratory skills and expertise. Attending professional meetings helps in the transfer of knowledge as well as networking with other professionals in the field of public health. Some LabAspire Fellows may have required travel for their DrPH program.

12. Is the LabAspire Fellowship transferable from one jurisdiction (PHL) to another?

As a general rule, a LabAspire Fellow completes their Fellowship training at the host (sponsoring) lab. In case of retirement of the host PHLD or relocation of the LabAspire Fellow to another lab for a justifiable reason, the LabAspire Fellowship may be redirected to another PHL that is willing to host the Fellow. This process involves an official redirection request and documentation. There are a few instances of LabAspire Fellowship transfer in the past.

13. Are there any expenses that are not reimbursed for CDPH employees enrolled in the LabAspire Program?

CDPH employees are not eligible for reimbursement for many types of expenses typically accrued during the Fellowship due to different types of reimbursement guidelines practiced at the state level. For example, it's generally difficult for CDPH employees to receive approval for out-of-state

travel reimbursement, educational costs, and supplemental salary compensation.

14. Why can't all LabAspire Fellows be CDPH employees?

Due to the complexity of state administrative requirements, CDPH currently does not have an internal system to host LabAspire Fellows that would provide the experience and education necessary to meet federal requirements. Local PHLs can provide more mentorship and training opportunities for LabAspire Fellows and have more flexible access to funding for salary compensation, educational requirements, and travel expenses for exams and conferences.

15. If a LabAspire Fellow achieves board certification, can they continue their Fellowship to pursue additional credentials?

The purpose of LabAspire Fellowship funding is to support eligible candidates to complete the educational and experience requirements to become future public health laboratory directors by acquiring either the ABB(PHLD), the ABB(HCLD), **OR** the D(ABMM). Once one national board certification is completed, any extension of LabAspire Fellowship duration or request for additional funding for other certifications or credentials must be made in writing to the LabAspire Committee for consideration on a case-by-case basis.

16. If there is an issue during the LabAspire Fellowship, who do we contact?

For general questions about the LabAspire program, eligibility requirements, and application process, contact Program Coordinator Dr. Hamida Nusrat at [hamida.nusrat@cdph.ca.gov](mailto:hamida.nusrat@cdph.ca.gov) or Program Manager Dr. Shantelle Lucas at [Shantelle.lucas@cdph.ca.gov](mailto:Shantelle.lucas@cdph.ca.gov)

For specific questions about funding, exceptional inquiries, award letters, and renewal of funding, contact the following:

- a. Wilfred Velasco at [Wilfred.Velasco@cdph.ca.gov](mailto:Wilfred.Velasco@cdph.ca.gov)
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## APPENDIX 12. References and Contributing Editors

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