

**DUTY STATEMENT**

Employee Name:	Position Number: <b>580-731-7940-018</b>
Classification: Public Health Microbiologist Specialist	Tenure/Time Base: Permanent/Full-Time
Working Title: Mycobacteriology Specialist	Work Location: 850 Marina Bay Parkway, Richmond, CA 94804
Collective Bargaining Unit: R10	Position Eligible for Telework (Yes/No): No
Center/Office/Division: Center for Laboratory Sciences / Infectious Diseases Laboratories Division	Branch/Section/Unit: Microbial Disease Laboratory Branch / Mycobacterial, Mycotic, and Parasitic Diseases Section / Mycobacterial Drug Susceptibility and Mycology Unit

All employees shall possess the general qualifications, as described in California Code of Regulations Title 2, Section 172, which include, but are not limited to integrity, honesty, dependability, thoroughness, accuracy, good judgment, initiative, resourcefulness, and the ability to work cooperatively with others.

This position requires the incumbent to maintain consistent and regular attendance; communicate effectively (orally and in writing) in dealing with the public and/or other employees; develop and maintain knowledge and skill related to specific tasks, methodologies, materials, tools, and equipment; complete assignments in a timely and efficient manner; and, adhere to departmental policies and procedures.

All California Department of Public Health (CDPH) employees perform work that is of the utmost importance, where each employee is important in supporting and promoting an environment of equity, diversity, and inclusivity, essential to the delivery of the department's mission. All employees are valued and should understand that their contributions and the contributions of their team members derive from different cultures, backgrounds, and life experiences, supporting innovations in public health services and programs for California.

### **Competencies**

The competencies required for this position are found on the classification specification for the classification noted above. Classification specifications are located on the [California Department of Human Resource's Job Descriptions webpage](#).

### **Job Summary**

This position supports the California Department of Public Health's (CDPH) mission and strategic plan by ensuring quality and providing timely and complex public health laboratory testing for diagnosis and epidemiologic investigation of tuberculosis, other mycobacterial infections, and fungal and parasitic diseases of great public health importance in the State of California.

The Public Health Microbiologist (PHM) Specialist organizes and performs the advanced, complex, and/or innovative testing and analyses that require independent action and judgment. The PHM Specialist works independently, with general guidance, to evaluate, validate, implement, and utilize sophisticated instrumentation, complex laboratory methods, and advance specialized software to detect, isolate, and identify microbial pathogens and genetic markers in a variety of clinical specimens and to perform comprehensive phenotypic and molecular characterization of antimicrobial drug susceptibility. The PHM Specialist provides technical expertise performing highly complex laboratory testing for a range of mycobacterial, fungal, and parasitic pathogens, including but not limited to drug susceptibility testing of *Mycobacterium tuberculosis*, species identification, and epidemiological strain typing and phylogenetic analysis.

The PHM Specialist reviews clinical and epidemiological reports, and updates laboratory and data analysis procedures, as necessary. The PHM Specialist is responsible for ensuring compliance with relevant federal, state and local regulatory quality and safety standards governing the breadth of work conducted in the Section. The PHM Specialist may be delegated Technical Supervision and/or General Supervision over non-waived, high-complexity testing as defined by Clinical Laboratory Improvement Amendments (CLIA). The individual mentors and trains entry-level laboratory staff internally and may provide consultation to Local, State, and Federal partners.

In the PHM Specialist role, the incumbent develops innovative laboratory methods, plans and implements validation studies, conducts applied public health-relevant research, analyzes and interprets complex laboratory data and draws conclusions, and prepares technical reports and papers for publication.

The incumbent works under the general direction of the Research Scientist Supervisor I of the Mycobacterial Drug Susceptibility and Mycology Unit in the Mycobacterial, Mycotic, and Parasitic Diseases Section of Microbial Diseases Laboratory Branch.

### Special Requirements

- ☐ Conflict of Interest (COI)
- ☐ Background Check and/or Fingerprinting Clearance
- ☒ Medical Clearance
- ☐ Travel:
- ☐ Bilingual: Pass a State written and/or verbal proficiency exam in
- ☒ License/Certification: California Public Health Microbiologist License
- ☒ Other: Requires work in Biosafety Level 3 environment

### Essential Functions (including percentage of time)

40% Performs high complexity diagnostic and surveillance testing for a variety of microorganisms of public health significance, including but not limited to phenotypic and molecular *Mycobacterium tuberculosis* complex (MTBC) drug susceptibility testing, MTBC and non-tuberculous *Mycobacteria* species identification, and epidemiological strain typing and phylogenetic analysis. Utilizes established laboratory methods, including but not limited to Next Generation Sequencing, Polymerase Chain Reaction, Matrix-assisted laser desorption ionization–time of flight mass spectrometry, and growth-based susceptibility testing using various platforms. Analyzes genomic sequences using bioinformatics pipelines and software. Performs

microbiological techniques, including culture, microscopy, and staining. Accurately and thoroughly interprets and records test results, reviews reports in the Laboratory Information Management System (LIMS) for completeness and accuracy and ensures that test performance is compliant before releasing results. Accurately maintains laboratory records for technical, safety, and quality activities. Ensures compliance with biosafety requirements, and federal and state regulations. Follows acceptable pre-analytic, analytic, and post-analytic practices and procedures. Provides subject matter expertise and technical guidance on tests and/or result interpretation to the MDL staff, submitters, epidemiologists, clinicians, and other internal and external partners. Assists with development, implementation, and improvements to the LIMS in the Unit. Maintains computer databases, resolves discrepancies in data, performs assay troubleshooting, and promptly advises management of deficiencies. Organizes and performs operational aspects of testing in the Unit that include, but are not limited to, coordination of specimen receipt and acceptance from submitters, scheduling testing activities and equipment/space usage by the staff, preparing reagents and media, maintaining reagent/supplies inventory, ordering and receiving supplies, and submitting and tracking work orders.

35% Assists with implementation and monitoring of Quality Assurance and Quality Control (QA/QC) policies and procedures for the Unit, including testing and reagent QC, maintaining instruments and equipment, and completing QA reports and audits to ensure compliance with Clinical Laboratory Improvements Act (CLIA) regulations, Microbial Diseases Laboratory QA policies, and other applicable standards. Identifies quality issues and provides technical troubleshooting expertise, when required. Completes non-conformance event reporting and implementation of corrective actions. Participates in process improvement projects focused on streamlining diagnostic testing (e.g., data analysis and reporting, laboratory assay performance, automation, testing algorithms) and QA/QC tasks. Discusses technical ideas and operational improvements with the Unit Supervisor and Section Chief prior to implementation. Develops, optimizes, and updates standard operating procedures for comprehensive laboratory testing. Under general guidance, plans, completes and/or leads CLIA/FDA verification/validation studies for new or revised laboratory methods, bioinformatics pipelines, procedures for media/reagents/equipment use; prepares validation and verification study reports and other documentation necessary for submission to regulatory bodies. Assists with orientation and training for new staff, microbiologist trainees, and interns. Assists with competency assessments.

20% Develops, evaluates, and optimizes new assays and/or procedures for pathogen identification and characterization using new innovative methods and platforms and a variety of molecular and phenotypic techniques. Reads scientific literature and evaluates experimental methods, identifies method limitations and advancements, and presents summaries of literature research and experimental results to the Unit Supervisor and higher leadership. Responds to requests for data for ad hoc reports necessary for Section grants, technical reports, and process improvements, generates technical and scientific reports, and contributes to peer-reviewed manuscripts for publication. Attends training and may present data at informational meetings, webinars, and/or conferences. Develops and delivers curriculum and content for training courses appropriate to the audience.

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**Marginal Functions (including percentage of time)**

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5% Other assigned duties as required, including assisting other units or sections as needed for surge capacity or emergency response.

☐ I certify this duty statement represents an accurate description of the essential functions of this position. I have discussed the duties and have provided a copy of this duty statement to the employee named above.

☐ I have read and understand the duties and requirements listed above and am able to perform these duties with or without reasonable accommodation. (If you believe reasonable accommodation may be necessary, or if unsure of a need for reasonable accommodation, inform the hiring supervisor.)

Supervisor's Name:	Date	Employee's Name:	Date
Supervisor's Signature	Date	Employee's Signature	Date

**HRD Use Only:**

Approved By: CP

Date: 7/28/25