DUTY STATEMENT

Employee Name:	Position Number: **580-530-5576-025**
Classification: Research Scientist I (Chemical Sciences)	Tenure/Time Base: Permanent/Full Time
Working Title: Clinical Chemistry Scientist	Work Location: 850 Marina Bay Parkway, MS 8200 Richmond, CA 94804
Collective Bargaining Unit: R 10	Position Eligible for Telework (Yes/No): No
Center/Office/Division: Center for Family Health/Genetic Disease Screening Program Division	Branch/Section/Unit: Laboratory Services Branch/Mass Spectrometry and Molecular Section/Spinal Muscular Atrophy (SMA) Screening 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 performing as a laboratory specialist, screening newborn specimens for Spinal Muscular Atrophy (SMA) in a Clinical Laboratory Improvement Amendments (CLIA) certified genetic laboratory.

The Research Scientist (RS) I (Chemical Sciences) (CS) will plan, organize, and carry out scientific research studies of limited scientific scope and complexity related to specimen testing for SMA disorder. The incumbent will utilize knowledge and hands-on experience of clinical chemistry,

immunochemistry, and molecular biology to perform clinical laboratory activities. The RS I (CS) will use highly complex methods including quantitative Polymerase Chain Reaction (qPCR), droplet digital PCR (ddPCR), and high-throughput liquid handling systems. The incumbent will follow established laboratory procedures and quality assurance policy, carry-out laboratory assays, and perform data analysis using statistical analysis tools (Excel, Statistical).

The incumbent works under the supervision of the Research Scientist Supervisor I (Chemical Sciences), Chief of Spinal Muscular Atrophy (SMA) Screening Unit in Mass Spectrometry and Molecular Section.

This position requires (at the time of appointment) the possession of a valid California Clinical Chemist license, a Clinical Laboratory Scientist (Generalist) license, or a Clinical Genetic Molecular Biologist Scientist license.

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: Possession of a valid California Clinical Chemist license, a Clinical Laboratory Scientist (Generalist) license, or a Clinical Genetic Molecular Biologist Scientist license
- ☐ Other:

Essential Functions (including percentage of time)

45% Perform clinical laboratory activities of limited complexity related to daily testing of newborn dried blood (DBS) specimens for SMA and other genetic disorders. Process biological clinical samples with potential bloodborne pathogens, using molecular and mass spectrometric techniques such as qPCR, ddPCR, sequencing, HPLC, and tandem mass spectrometry (MS/MS). Operate, under supervision, complex instruments such as high-throughput automated liquid handlers and next-generation sequencers. Process large volume of specimens and ensure the validity of test results by understanding and mastering the quality control/quality assurance requirements for the assays. Conduct daily review and release of analytical results following Quality Control/Quality Assurance (QC/QA) protocols. Document clinical laboratory activities in compliance with CLIA requirements.

20% Perform calibration and coordinate routine maintenance of complex instruments such as high-throughput automated liquid handlers and next-generation sequencers, as well as other instruments used in the Genetic Disease Laboratory Branch. Conduct weekly inventory of reagents and supplies to coordinate with contract analysts for the purchase of reagents, consumables, and services to avoid interruption in the screening of SMA in newborns. Troubleshoot instrumentations (such as liquid handlers, qPCR, ddPCR), reagents, and other process failures, take appropriate remedial actions, and document the failures according to CLIA regulation and requirement.

10% Conduct verification of reagent lots for DNA extraction, qPCR, ddPCR and other assays. Generate and validate assay reference materials through quality control testing. Validate new and replacement instruments (such as liquid handler, qPCR, and ddPCR). Prepare reports for all the verification and validation activities for the supervisor and senior scientific staff.

10% Work in a team on optimization of methods, validation of existing standard operating procedures (SOPs), and revision of established SOPs for newborn and prenatal screening assays, using various chemical and molecular diagnostic tools. Participate in installation, operation, and validation of complex instrumentation. Process patient and reference specimens and establish accuracy, precision, sensitivity, and specificity of methods to perform data analysis and prepare reports for publication of experimental findings.

5% Assist in the preparation and coordination of compliance inspections as required by CLIA, local, state, and federal regulatory agencies.

Marginal Functions (including percentage of time)

5% Assist in providing training to other staff on laboratory assays and/or data review procedures.

5% Perform other work-related duties as required.

☐ 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: JC
Date: 7/1/24