DPF 44 Research Scientist 3 – Microbiology Fellow

Two 2-Year Temporary Position(s)

Under direction of a Research Scientist 1 and/or other supervisory officials in a state department, institution, or agency,

25% Gains an in-depth knowledge of laboratory methods and operations in Foodborne/Enterics/Whole Genome Sequencing, Sanitary Bacteriology, Mycobacteriology, Biothreat Response Laboratory, STD, Special Bacteriology, Molecular Virology and Viral Serology laboratory units through hands on rotations, review of SOPs and mentoring from program managers and staff. Becomes familiar with federal programs such as CDC PulseNet, FERN, LRN, ARLN etc through review of webpages, attendance at meetings and participation in conference calls with CDC. Becomes familiar with the Epidemiology Laboratory Capacity grant workplan objectives and milestones for Microbiology and Virology. 1

25%. Implements and carries out research projects designed by senior scientific staff which improve the quality of public health services in New Jersey. Investigates, reviews, modifies, develops, and tests new analytical procedures and methodologies and/or conducts other specialized research of a highly complex and technical nature. Completes validation and implementation of new procedures following clinical laboratory regulations. Mentors interns and staff; provides scientific expertise and problem solving/troubleshooting efforts regarding laboratory testing and instrumentation. Develop and run routine or special project data analytics/statistics for quality tracking or quality improvement. 2

15% Identifies, designs and implements corrective actions to address gaps identified through audits and exercises. Gains in-depth knowledge of quality assurance and safety regulations and quality management systems through review of documentation, participation in audits and on Safety and Quality Standing Committees and through mentoring from Quality Assurance Officers and Safety Officer. Lead a quality improvement project. 3

10% Gains knowledge of laboratory management practices to include personnel management, materials management, equipment and facilities maintenance, budget preparation and management and grants management through policy and procedure review, use of inhouse process flow software (i.e. NCE, ReqTrack, eCATS, ePAR, Copia inventory platform, and other workflow platforms as applicable), review of HR and FGS Policies and related labor and finance regulations, mentoring and participation in training programs. Complete virtual leadership/management modules coordinated through APHL, CDC, and/or NJ DOH. 4

10% Assists in the design of research projects in collaboration with Laboratory Directors, other senior scientific staff, epidemiologists, hospital laboratory directors, local health department officials and other partners of the NJDOH to improve the quality of public health services in New Jersey. Participates on PHEL/CDS Committee, Vector borne Disease Committee, Vaccine Preventable Committee and PHEL Client Service Advisory Board. Review and analyze publications and other documents pertaining to current research developments and disseminates information to workgroups as needed. 5

6% Develops communications skills through delivery of presentations for staff, clients, interns, students and colleagues, posters for professional presentations, articles for publication and newsletters, alerts, and webpage design. Presents a paper or poster at the annual APHL meeting. Participates in outreach to colleges and/or in a career fair. Interprets and displays raw analytical data; submits analysis to senior staff for approval and prepares or participates in the preparation of sound, accurate reports containing findings, conclusions, and recommendations. 6

5%. Gains a broad understanding of the functions of other laboratory units within the PHEL to include Newborn Screening, Organic Chemistry, Inorganic Chemistry, Biomonitoring, Chemical Terrorism. Medicinal Marijuana laboratories to include laboratory methods employed, and client needs and services provided as well as policies and regulations implemented through the provision of services. Rotate through the Clinical Laboratory Improvement Services to gain an understanding of clinical laboratory regulations. 7

4% Gains knowledge of emergency operations preparedness through training, drills and annual policy review and updates. Becomes certified through Homeland Security Exercise Evaluation Program (HSEEP) and Packaging and Shipping training. Participates in one or more exercises. 8

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MISSION CRITICAL

PHEL will develop and maintain a commitment to scientific excellence, in times when national security and economic advancement are linked closely to advancements in science and technology.  The PHEL Outreach and Training Program will facilitate scientific training for PHEL staff and external workforce partners as well as to provide opportunities for talented students and post-graduates to learn on the job and contribute to the mission of the Department.  The program also facilitates emergency communications with clinical partners.

Fellow

The PHEL Fellow will participate in a two-year program designed for laboratory leadership development. The fellow will participate in research projects in collaboration with senior scientific staff, epidemiologists, and other NJDOH partners, PHEL quality management and operational improvements,

laboratory outreach to colleges and universities, collaborative efforts with CDC programs such as PulseNet, ARLN and CalciNet, operations and with the Association for Public Health Laboratories (APHL).