**Hawaii Department of Health STATE LABORATORIES DIVISION Public Health LABORATORY TRAINING INTERNSHIP**

**Welcome to the State Laboratories!**

Public health laboratories are an interesting and dynamic place to practice all forms of lab science. Your time spent in our lab should be an enjoyable and educational experience.

A primary objective of this training program is to introduce the student to the world of public health laboratories, which is different, but complimentary to clinical laboratories. During your brief internship you will be exposed to selected aspects of the State Laboratories Division (SLD). You may handle specimen, work with selective media, report results, and assist SLD staff in testing of samples. After completing the internship, you will be able to describe the differences between population-based testing and individual patient testing and list the CLIA requirements for this type of laboratory testing.

**Laboratory Information**

Hawaii Department of Health, State Laboratories Division

**Training Facility**

2725 Waimano Home Road

Pearl City, HI

Administration (808) 453-6652

**Regular Lab Hours Internship Lab Hours**

7:45 to 17:15 To be arranged with mentor.

**Orientation**

1. Introduction to Dr. Whelen, Kent Kitagawa, Gail Kunimoto, Rebecca Sciulli, Robert Ueki, Remie Gose, and other SLD staff.

2. Walk through tour of lab:

- where to get clean lab coats, put dirty ones and wash up area

- various benches, incubators, fridges, store room

- bathroom and staff room facilities

- library

- overview of safety rules e.g. no open toe or open heel shoes, fire alarm

pulls, stairway exits, fire extinguishers, eye wash / shower stations.

**Competencies and Objectives**

Please refer to objectives checklist and insure all tasks initialed.

**Education**

This is a 14 week training internship in a CLIA licensed public laboratory for undergraduate students. The schedule may change based on testing demands and time limits.

**Evaluations**

Students will have a learning assessment at the end of the internship.

Each student will be evaluated by a technologist / microbiologist working as their mentor in the area that the student is assigned.

Students will also regularly meet with project managers to discuss ideas for improvement of internship and problem areas.

## Hawaii Department of Health STATE LABORATORIES DIVISION

## Public Health Laboratory Performance Objectives

Upon completion of the Public Health Laboratory Internship at the Hawaii Department of Health State Laboratories Division, the student will be able to:

**Instr Student** **Quality Management and Regulatory Practices**

 Describe departmental protocol and safe work practices. **(10 hours – mostly reading)**

 Understand the basis of the public health laboratory system (**10 hours**)

 Demonstrate how to wear personal protective equipment (PPE) and list when required. **(5 hours)**

 Demonstrate how to properly decontaminate a biosafety cabinet **(4 hours)**

 Observe how to unpack and store reagents **(2 hours)**

 Demonstrate proper technique for cleaning glassware **(5 hours)**

 Demonstrate how to dispose of contaminated materials according to standard precautions. **(10 hours)**

 Describe the safety procedures for handling chemicals according to safety procedures. **(2 hour)**

 List criteria for evaluating specimens and requisitions for acceptability using laboratory protocol. **(2 hours)**

 Describe or list or outline the steps for proper specimen handling to microbiological specimens in regard to timeliness, appropriateness of specimen submitted for analysis requested, safety and security of collection system, and completeness of essential patient information, to the satisfaction of the clinical instructor. **(5 hours)**

 Document rejected specimens according to laboratory's procedures for specimen rejection. **(1 hour)**

 Explain specimen collection systems, storage conditions, and acceptable lengths of storage. **(1 hour)**

 Accurately record temperatures of laboratories, incubators, and water baths. **(5 hours)**

 State the proper incubation temperature and atmosphere conditions for specified cultures. **(1 hour)**

 State the purpose of quality systems in the microbiology laboratory. **(2 hours)**

 Describe QC procedures (stains, media, biochemical tests, antisera) **(2 hours)**

 Record any QC results with 100% accuracy. **(1 hour)**

 Identify divergent results to instructor and suggest corrective actions. **(2 hours)**

 Outline the steps in basic laboratory computer operations where relevant. **(3 hours)**

 List patient confidentiality responsibilities, HIPAA requirements, and Public Health exclusions. **(2 hour)**

\_\_\_\_\_\_ \_\_\_\_\_ Describe why instrument manuals, procedure standard operating procedures (SOPs), and protocols should be routinely updated. **(4 hours)**

\_\_\_\_\_\_ \_\_\_\_\_ Explain the purpose of Clinical Laboratory Improvement Amendments (Title 42 Part 493) **(5 hours)**

\_\_\_\_\_\_ \_\_\_\_\_ Describe of categories of tests by complexity **(1 hour)**

\_\_\_\_\_\_ \_\_\_\_\_ List the categories of laboratories performing CLIA regulated tests **(1 hour)**

\_\_\_\_\_\_ \_\_\_\_\_ Describe proficiency testing purpose and requirements **(1 hour)**

\_\_\_\_\_\_ \_\_\_\_\_ List the principles of pre-analytic, analytic, and post-analytic quality management **(1 hour)**

\_\_\_\_\_\_ \_\_\_\_\_ List the personnel categories and requirements for non-waived testing **(1 hour)**

\_\_\_\_\_\_ \_\_\_\_\_ List the personnel competency assessment theory and practice **(1 hour)**

\_\_\_\_\_\_ \_\_\_\_\_ List the requirements under Hawaii State Law and Administrative Rules 110.1 **(2 hours)**

**Instr Student [mentor specific checklist]**

\_\_\_\_\_\_ \_\_\_\_\_ (Explain location of room temp thermometers in lab 1234 and the importance of their locations) **(1 hour)**

\_\_\_\_\_\_ \_\_\_\_\_ (describe what machine X does, and where to find the manual and SOP) **(3 hours)**

\_\_\_\_\_\_ \_\_\_\_\_ (Perform a QC run for procedure ZEBRA accurately without assistance) **(5 hours)**

\_\_\_\_\_\_ \_\_\_\_\_ (describe paper work trail for a parachuting PT) **(2 hours)**

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**Complete 10 of the following areas**

**Instr Student**

 Demonstrate the ability to select isolated colonies from a culture plate, streak for isolation, and obtain isolated colonies. **(5 hours)**

 Correlate Gram stain results with isolates on culture plates to the satisfaction of the clinical instructor. **(5 hours)**

 Recognize alpha (α), beta (ß) and gamma (γ) hemolysis with 100% accuracy. **(2 hours)**

 Distinguish between gram-positive and gram-negative organisms using their Gram stain characteristics and/or their growth on selective media with 100% accuracy. **(5 hours)**

 List the biochemical media and identification systems used in the public health laboratory. **(2 hours)**

 Describe the public health significance of: **(6 hours)**

 *N. meningitidis*

 *Staphylococcus aureus*

 *N. gonorrhoeae*

 *Hemophilus influenzae*

 *Campylobacter jejuni*

 *Salmonella* spp.

 *Shigella* spp.

 *Leptospira*

 *Listeria monocytogenes*

 *Clostridium perfringens*

 *Bordetella perrtussis*

 Outline the steps for PCR screen for Influenza A or B. **(2 hours)**

 Outline the procedure for respiratory virus culture and identification methods. **(2 hours)**

 Describe the Influenza testing algorithm to the satisfaction of the clinical instructor. **(2 hour)**

 Describe the HIV testing algorithm to the satisfaction of the clinical instructor. **(2 hour)**

 Describe the public health impact and diagnosis of norovirus. **(1 hour)**

 Describe the 3 levels of the National Laboratory Response Network. **(1 hour)**

 Describe the PulseNet strategy to assess food borne diseases. **(2 hour)**

\_\_\_\_\_\_ \_\_\_\_\_ Demonstrate how to properly package, prepare, and sterilize bio hazardous waste using an autoclave. **(3 hours)**

**Hawaii Department of Health STATE LABORATORIES DIVISION**

**Public Health Laboratory Training Intern Evaluation**

Lab area:

Dates of Rotation:

Length of Rotation adequate\_\_\_\_\_\_\_\_ inadequate \_\_\_\_\_\_\_\_\_

Were the objectives covered?

Was the staff courteous and knowledgeable?

Were you allowed to actively participate on the bench?

Were questions welcomed and answered?

Areas for improvement:

Areas or staff that exceeded your expectations:

General Comments:

**Hawaii Department of Health STATE LABORATORIES DIVISION**

**Trainee Evaluation Form For Technologist**

Name of the Trainee:

Dates of training:

**Training Section:**  **Supervising Microbiologist:**

**Scale: Unacceptable 🡪🡪 Superior**

 [1 --- 2 --- 3 --- 4 --- 5]

**Circle one:**

**1. Skill and competence in performance:**

 a. Manual dexterity 1 2 3 4 5

 b. Accuracy 1 2 3 4 5

**2. Knowledge base:**

 a. Demonstrates relationship between principles & procedures 1 2 3 4 5

 b. Interpretation of test results 1 2 3 4 5

 c. Recognition of errors 1 2 3 4 5

**3. Care and concern for order and clarity:**

 a. Attention to detail 1 2 3 4 5

 b. Neatness in maintenance of work area 1 2 3 4 5

 c. Accuracy and legibility in reporting results 1 2 3 4 5

**4. Efficiency and organization:**

 a. Ability to sequence task (priority setting) 1 2 3 4 5

 b. Adherence to established protocol s 1 2 3 4 5

**5. Dependability and commitment:**

 a. Carries out duties promptly with enthusiasm 1 2 3 4 5

 b. Able to work independently 1 2 3 4 5

 c. Shows initiative (ideas for improvement) 1 2 3 4 5

 d. Responsible 1 2 3 4 5

 e. Demonstrates emotional stability in stressful situation 1 2 3 4 5

**6. Interpersonal relation:**

 a. Cooperates with others 1 2 3 4 5

 b. Ability to accept constructive criticism 1 2 3 4 5

 c. Tactful in dealing with colleagues and personnel 1 2 3 4 5

**7. Communication:**

 a. Clear and precise in instructions and / or explanations 1 2 3 4 5

 b. Good communication 1 2 3 4 5

 c. Asks smart questions when in doubt 1 2 3 4 5

**Comments:**