

Laboratory Methods for Detecting Rabies Virus

Tuesday, January 14, 2025—Friday, January 17, 2025

California Department of Public Health, Public Health Laboratory | Richmond, CA

Co-Sponsored by the Association of Public Health Laboratories (APHL) in collaboration with the Centers for Disease Control (CDC) and Viral and Rickettsial Disease Laboratory, California Department of Public Health.

DESCRIPTION

Designed for individuals performing rabies testing in public health and veterinary diagnostics laboratories, this three and one-half day workshop addresses traditional rabies testing techniques, safety in the rabies laboratory, specimen acquisition and preparation, rabies quality control and proficiency testing, standardized testing procedures, emerging technologies and epidemiologic issues.

Prerequisite courses (available on-line and at no cost) may be required.

AUDIENCE

This advanced-level workshop is designed for the public health microbiologists with responsibilities for bench testing or supervising the rabies laboratory. Participants must be familiar with the general methods for safe handling of infectious viruses.

OBJECTIVES

At the conclusion of this workshop, the participant will be able to:

- Describe the basic properties of rabies virus, transmission and disease course including clinical aspects of rabies in humans
- Discuss the epidemiology of animal rabies
- Assess Critical role of rabies laboratory for diagnostics and interpretation of laboratory results
- Recommend safe practices for diagnostic testing and shipping
- Identify and prepare appropriate specimens for rabies testing
- Perform LN34 pan-Lyssavirus RT-PCR and interpret test results
- Describe unique considerations associated with rabies Nucleic Acid Amplification Testing (NAAT)
- Discuss implementation of NAAT depending on laboratory needs
- Review importance of standardized DFA
- Perform standardized DFA procedure including detecting rabies virus (RV) antigen, troubleshooting and interpreting difficult test results
- Perform modified commercial lateral flow assay
- Describe the recent and potential future updates to rabies virus diagnostics
- Summarize quality control and quality assurance procedure for the rabies laboratory

APPLICATION TO ATTEND

APPLY NOW!

Application Closes: **August 26, 2024 | 11:59 pm ET**

Application via the link above is required to participate in the workshop. Upon acceptance into this training, a confirmation letter with detailed workshop and travel information will be sent by email.

Only completed applications received by the deadline will be considered. Application does not guarantee acceptance. Participants will be selected according to the degree to which the applicant's job description, experience and responsibilities are consistent with the workshop objectives. Priority will be given for one applicant per public health laboratory, with a second person considered. **Notification of application status will be sent via email after September 9, 2024.**

Rabies Immune Status Requirement: Applicants must upload proof of rabies immune status with their application submission in order for the application to be considered. Instructions are provided in the online application.

REPORT CRITERIA: Immunization records will NOT BE ACCEPTED as proof of immunity; a copy of the actual laboratory report of the RFFIT or FAVN test results is required.

The test performed should be stated on the report and should be a virus neutralizing antibody titer (RFFIT or FAVN), not IgG (ELISA) type procedure, adhering to current [Advisory Committee on Immunization Practices \(ACIP\) recommendations](#), including recommended frequencies for titer checks. If your test was performed using an IgG procedure, your titer will have to be retested using a virus neutralizing antibody titer (RFFIT or FAVN) procedure instead.

Test results should include titer and interpretation (minimum acceptable antibody titer level of ≥ 0.5 IU/mL, even at a screening dilution). If the test requested was an antibody screen, not titer, the report should state if the cutoff for IU/ml for minimum acceptable antibody titer level was reached.

FACULTY

Division of Viral and Rickettsial Diseases, Poxvirus and Rabies Branch, Centers for Disease Control & Prevention, Atlanta, GA

- Crystal Gigante, PhD
- Lillian A. Orciari, MT, MS

Center for Laboratory Sciences, California Department of Public Health, Richmond, CA

- Carol Glaser, MD, DVM, MPVM

Viral and Rickettsial Disease Laboratory, California Department of Public Health, Richmond, CA

- Sharon Messenger, PhD

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AGENDA

Day 1 | Tuesday, January 14

7:45 am.....Registration
 8:00 am.....Welcome and Introductions
 8:30 am.....**Pre-Training Assessment**
 8:45 am.....**Lecture:** Rabies Overview
 9:15 am.....**Lecture:** The Role of the Laboratory in Surveillance
 9:45 am.....**Lecture/Discussion:** Brain Dissection
 10:15 amBreak
 10:30 am**Lecture:** Laboratory Safety
 11:00 am**Lecture:** The National Standard Protocol
 11:30 amLunch
 12:30 pmSafety Orientation
 1:00 pm.....**Laboratory:** Brain Dissection/Slide Preparation
 3:30 pm.....Break
 3:45 pm.....**Laboratory:** Slide Reading
 4:30 pm.....Group Discussion
 5:00 pm.....Adjourn

Day 2 | Wednesday, January 15

8:00 am.....**Recap and Overview**
 8:15 am.....**Lecture:** Confirmatory Testing/Troubleshooting
 9:00 am.....Break
 9:15 am.....**Laboratory:** DFA and Slide Reading
 11:30 amLunch
 12:30 pm**Lecture:** Rabies Diagnosis Using PCR, PCR Considerations
 1:15 pm.....**Laboratory:** RNA Extraction
 2:30 pm.....Break
 2:45 pm.....**Laboratory:** LN34 RT-PCR
 4:30 pm.....Group Discussion
 5:00 pm.....Adjourn

Day 3 | Thursday, January 16

8:00 am.....**Recap and Overview**
 8:15 am.....**Lecture:** Preparation and Evaluation of Conjugate
 8:45 am.....**Laboratory Exercise:** Conjugate Titration
 9:30 am.....**Laboratory Exercise:** Conjugate Titration (Slide reading)
 10:15 amBreak
 10:30 am**Group Discussion:** Conjugate Titration Results
 11:15 am**Lecture:** Overview of PCR Results
 11:45 amReview of PCR Results
 12:30 pmLunch
 1:30 pm**Lecture:** Lateral Flow Assay
 2:15 pm**Laboratory:** Bat Identification/Slide Reading/LFA
 3:30 pmBreak
 3:45 pm**Laboratory:** Bat Identification/Slide Reading/LFA
 4:30 pmGroup Discussion
 5:00 pmAdjourn

Day 4 | Day, Friday, January 17

8:00 am.....**Recap and Overview**
 8:15 am.....**Lecture:** Rabies Diagnosis in the US
 8:45 am.....**Post-Training Assessment**
 9:00 am**Laboratory Practical**
 10:15 amBreak
 10:30 am**Lecture:** Clinical Aspects and Diagnosis of Rabies in Humans
 11:15 amCourse Wrap Up and Discussion
 12:00 pmAdjourn

ACCESSIBILITY

In compliance with the Americans with Disabilities Act, individuals seeking special accommodations must email a request to [Ashton Blair](#) at least three weeks prior to the workshop's start date.

CONTINUING EDUCATION

The Association of Public Health Laboratories (APHL) is approved as a provider of continuing education programs in the clinical laboratory sciences by the ASCLS P.A.C.E.® Program. P.A.C.E.® is accepted by all licensure states except Florida. This learning activity will provide contact hours for the participant who successfully completes this training.

By registering for this event, you are consenting to have your information shared with APHL event collaborators, such as the Centers for Disease Control and Prevention and Public Health Laboratories. We will not, in any circumstances, share your information with other individuals or organizations without your permission, including corporations or individuals, except when applicable by law. We do not sell, communicate or divulge your information to any mailing lists.

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