



Public Health Laboratory Newsletter

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Sentinel *Brucella abortus* RB51 Notification

This information is being provided to you at the request of the CDC subject matter experts for *Brucella*. All questions/comments regarding this message should be directed to your State/Local Public Health Laboratory.

This message is to inform you of an ongoing public health investigation involving exposures to *Brucella abortus* RB51 through consumption of raw milk and milk products from a dairy in Quarryville, Pennsylvania. A person who drank raw (unpasteurized) milk from this dairy was diagnosed with brucellosis caused by *Brucella abortus* RB51. Milk samples from the dairy have also tested positive for *Brucella abortus* RB51. As of January 22 of this year, exposures have been identified in 19 states: Alabama, California, Connecticut, Florida, Georgia, Iowa, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, New Jersey, New York, North Carolina, Ohio, Pennsylvania, Rhode Island, South Carolina and Virginia.

Brucella abortus RB51 is resistant to rifampin and penicillin. There is no serological test available to specifically detect *Brucella abortus* RB51 infection.

(Continued on page 3)

Changes to State Public Health Test Menu at Shelby County Laboratory

In an effort to comply with the Governor’s priority for fiscal strength and efficient government, the Nashville Central Laboratory has been evaluating tests on the State Public Health Laboratory’s test menu to identify opportunities to reduce costs and duplication of services. Due to the costs associated with maintaining low volume tests at multiple locations, including equipment, maintenance contracts, the decision has been made to discontinue the following tests at the Shelby County Laboratory:

- **Biofire GI Panel**
- **Norovirus PCR**
- **Influenza PCR**
- **Quantiferon**
- **Bioterrorism Testing**

(Continued on page 3)

SPOTLIGHT ON SAFETY



Interim Clinical Laboratory Guidelines for Biological Safety

Interim Clinical Laboratory Guidelines for Biological Safety webpage is a valuable resource available from American Society for Microbiology. This resource contains guidance on Laboratory Risk Assessment, Sentinel Laboratory Biosafety, Biosecurity and Biomedical Waste Management.

The Biosafety section includes guidance for MALDI-TOF MS Identification Systems, Molecular Identification Methods and Total Laboratory Automation in the microbiology lab. As more labs implement these cutting edge technologies, it is important that safety risk is carefully considered through an assessment prior to initiation of testing. Once risk assessment is completed and safety mitigation plans are approved, the plan should be written into the SOP. Training should include safety and competency to perform the test safely, and should be confirmed and documented.

The resource may be downloaded free of charge from the following links:

- <https://www.asm.org/Articles/Policy/Interim-Clinical-Laboratory-Guideline-for-Biologic>
- <https://www.asm.org/ASM/media/Policy-and-Advocacy/Biosafety-white-paper-2019.pdf>

*Submitted by:
Rolinda Eddings MT(ASCP), Safety Officer*

TN Lab Services Participates in APHL Peer Network Program with South Dakota



TDH Laboratory Services was chosen to partner with South Dakota Department of Health Laboratory for the APHL Peer Network Program. The purpose of the program is to bring all biosafety stakeholders to a common level of practice to provide a base for further building and strengthening the nation's biosafety capacity. As part of the program, Whitney Lutkemeier, Biosafety Officer from South Dakota Department of Health Laboratory, visited TDH Laboratory Services in March to meet with Rolinda Eddings, TN Lab Services Safety Officer. During the visit, Whitney was given the opportunity to meet TDH Lab Services staff and collaborate on strengthening the biosafety and biosecurity competencies of the public health laboratories.

Newborn Screening Section Added to Lab Services Website

A Newborn Screening section has recently been added to the Lab Services website. The webpage <https://www.tn.gov/newbornscreeninglab> includes many useful resources including information about the TDH Newborn Screening Laboratory, parent and educational resources, shipping information, and more.

Sentinel Brucella abortus RB51 Notification (Continued from page 1)

Blood culture is the recommended diagnostic test for exposed symptomatic individuals. Health alert notifications (HANs) have been prepared and sent out to physicians to inform them of this situation and provide recommendations. This information serves two purposes:

- 1) Make laboratories aware of possible submissions for *Brucella* culture in an effort to decrease the potential for laboratory exposures *and*
- 2) Provide key points regarding the identification of *Brucella abortus* RB51 which differs slightly from other *Brucella abortus* species.

Biosafety:

- Samples suspected of containing *Brucella* should be clearly labeled as “**suspected *Brucella* spp.**”
- When handling suspected *Brucella* samples, increased biosafety practices should be implemented to minimize laboratory exposure. These include:
 - 1) At a minimum, these samples should be manipulated by BSL-2 facilities using BSL-3 practices.
 - 2) Perform all sample manipulations within a Class II (or higher) certified Biosafety Cabinet (BSC).

***Brucella* strain RB51:**

- *Brucella abortus* RB51 is a rough *Brucella abortus* strain and antibodies against *Brucella abortus* RB51 will not be detected by standard serology tests (i.e. ELISA, BMAT).
- Blood culture is the most reliable way of diagnosing brucellosis caused by *Brucella abortus* RB51.
- *Brucella abortus* RB51 characteristics may deviate from ASM Guidelines for the identification of *Brucella*, i.e. possible growth on MacConkey agar.
- *Brucella abortus* RB51 may be misidentified by automated instruments so their use should be avoided.
- **Bacterial isolates that are suspected *Brucella* spp. should be immediately forwarded to the closest LRN laboratory (prior notification required).**

Submitted by
Russell Bowden , Jr., MS HSA, MT
Sentinel Laboratory Preparedness Coordinator

Changes to State Public Health Test Menu at Shelby County Laboratory (Continued from page 1)

As of March 1, 2019, requests for the aforementioned tests have been absorbed into the Nashville Central Laboratory workflow. All approved test requests from the West Tennessee Region for the tests mentioned above should be sent to the Nashville Central Laboratory at 630 Hart Lane, Nashville, TN 37216. Local Health Departments that need Nashville Lab courier labels may request them utilizing the [Lab Supply Request Form PH-1580A](#) located on the Laboratory website at:

<https://www.tn.gov/health/health-program-areas/lab.html>

As always, we greatly appreciate your continued support for Tennessee’s Public Health Laboratory as we strive for new ways to provide optimal customer service to our clients while remaining fiscally accountable. If you have any questions regarding this change, please contact Paula Gibbs, Clinical Division Director at 615-262-6364 or Paula.L.Gibbs@tn.gov.

Molecular Biology Section Validating New Screening Method for Bacterial Meningitis

Meningitis can come in many forms: bacterial, fungal, parasitic and viral. Characteristics of meningitis are the inflammation of the membranes that cover the brain and spinal cord which could lead to serious injury or even death. There are several types of pathogens that are the leading cause of meningitis in the United States. The Tennessee Department of Health Lab Services molecular department is validating a new screening method for bacterial meningitis. This new method will detect *Neisseria meningitidis*, *Streptococcus pneumoniae* and *Haemophilus influenzae* by real-time polymerase chain reaction and would allow results to be available within a 24-hour time frame.

For bacterial meningitis, it is important to know which type of bacteria is causing the meningitis because antibiotics may prevent some types from spreading and infecting other people. Before the 1990's, *Haemophilus influenzae* type b (Hib) was the leading cause of bacterial meningitis. The Hib vaccine is now given to all children as part of their routine immunizations. This vaccine has reduced the number of cases of Hib infections and the number of related meningitis cases. Since the 1990's, other vaccines have become available for the prevention of bacterial meningitis.

The strategy for testing with PCR is to detect the causative agent in the suspected case of bacterial meningitis. If the specimen is positive, the molecular division will determine the appropriate serogroup that is specific to that assay. The capsule gene loci of *N. meningitidis* have areas that are both unique and conserved within each serogroup, thus providing gene targets for the development of real-time PCR assays designed to identify each specific serogroup.

N. meningitidis can be classified into 12 serogroups on the basis of the chemical composition and linkage type of saccharide subunits of the capsular polysaccharide that are expressed on the bacterial cell surface. Meningitis is a life-threatening disease. Rapid, accurate diagnosis is essential for optimal management of patients and the provision of prompt prophylaxis to contacts. Confirmation of the diagnosis allows physicians to use narrow-spectrum antibiotics, limit the duration of treatment and provide prognostic information. It also provides vital disease burden information, including data to inform vaccine policy.

Submitted by:

*Linda Thomas, MAFM, BSMT (ASCP), Manger, Molecular Biology
Jeannette Dill, M(ASCP), Supervisor, Molecular Biology*

TDH Lab Services Clinical Laboratory Requisition Revised

The TDH Laboratory Services Clinical Laboratory Requisition (PH-4182) has been revised. The fillable PDF requisition may be downloaded from the Laboratory Services webpage:

<https://www.tn.gov/health/health-program-areas/lab.html>

Please note that all required fields must be completed.

Final test reports cannot be issued if required information is missing.

Please discontinue the use of the previous versions of this requisition.

Lab Validating New Methodology for Carbapenem-Resistant Organisms

The ARLN-CRO laboratory section is currently validating extended carbapenem-resistance enzyme testing of the Oxa-class. The specific gene detection targets are of the Oxa-23-like, 24/40-like and 58-like type. These genes code for up to 21 Oxa enzymes. The resistance mechanisms are often expressive in highly resistant *Acinetobacter baumannii* isolates. The detection will take place on the ABI 7500 Fast-DX instrumentation using primers and probes developed by the CDC, and the process will take approximately one hour to complete. The state lab expects that the addition of this testing will further serve to decrease the transmission of highly resistant *Acinetobacter* isolates in hospitals and long-term care facilities in the entire Southeast region.

Submitted by:
Tracy McLemore, MT (ASCP), MBA
Manager, Molecular Enteric Microbiology and Antibiotic Resistance Program

2019 APHL- CDC Antimicrobial Resistance Fellow

The Tennessee Department of Health Laboratory will soon welcome a new ARLN fellow, with an expected start date in the summer of 2019. The ARLN fellowship is offered through APHL with support from the CDC to provide post-graduate Masters and PhD level laboratorians the opportunity to work in public health with a specific focus on combating antimicrobial resistance. While training at the lab, the fellow will work closely with our ARLN team to bring on new testing and evaluate new technologies and protocols such as Next-Generation Sequencing for Carbapenemase-producing *Enterobacteriaceae*. The fellow will also have the opportunity to work on a self-directed project to present at the annual APHL meeting. This 1 to 2 year fellowship will benefit both the fellow and the TDH lab. We are excited and looking forward to participating as a host lab.

Submitted by:
Victoria Stone, Ph.D., PH Laboratory Consultant 2

Tabatha East Selected as Assistant Director of Clinical Microbiology



Tabatha East has joined the Tennessee Department of Health as the Assistant Director of Clinical Microbiology at the Nashville Public Health Laboratory. As Assistant Director of Clinical Microbiology, Tabatha will provide oversight to the General Bacteriology, GC ARLN, Special Microbiology (Mycology, Candida ARLN, Mycobacteriology and Parasitology), Serology, Virology, Bioterrorism and Laboratory Support Services sections of the PH Laboratory. With nearly 15 years of clinical laboratory experience, Tabatha has served in various roles within the laboratory. Prior to her current role, Tabatha worked at Vanderbilt University Medical Center for 6 years, spending the majority of her tenure in Microbiology as a Supervisor. Tabatha earned a baccalaureate in Biology and Chemistry from Western Kentucky University, a baccalaureate in Clinical Laboratory Science from Eastern Kentucky University and a MBA in Healthcare Administration from Western Governors University-Tennessee. She is excited to join the TDH Laboratory team.

Employee Service Awards

The following Lab Services employees were presented with service awards on February 14, 2019. Thank you for your service!

5 Years:

- DeAnna Baisden
- Cliff Cunningham
- Carol King
- Blanca Martinez
- Tracy Minster
- Erica Terrell
- Nicole West

10 Years:

- Junjun Huang

15 Years:

- Michael Chen
- Paula Gibbs
- Anthony Wilson

25 Years:

- Jeanette Dill
- Manomohan Pattanayek

30 Years:

- Vicki Lambert

40 Years:

- Jim Gibson

TRAINING NEWS

2019 TDH WORKSHOPS

The following TDH workshops are brought to you at NO CHARGE by the Public Health Emergency Preparedness Grant.

To register for TDH workshops, click on the date/location to complete the online application or visit the Lab Services webpage <https://www.tn.gov/health/health-program-areas/lab/lab-education.html> to register or download the workshop flyers.

2019 INFECTIOUS SUBSTANCE PACKAGING AND SHIPPING TRAINING

DESCRIPTION:

Individuals who send or oversee the transportation of infectious or biological substances must know and understand regulations that apply to the mode of transportation they employ. This workshop will assist participants in maintaining compliance with regulations associated with transport of Division 6.2 infectious substances.

AUDIENCE:

Laboratory personnel involved with the classification and shipment of Category A and/or Category B biohazardous substances working in clinical laboratories in Tennessee. CE Credit will be provided for TN Lab Licensure renewal.

DATES/LOCATIONS:

[May 2: Chattanooga](#)

[May 15: Knoxville](#)

[May 16: Johnson City](#)

[June 20: Cookeville](#)

[July 25: Nashville](#)

[September 11: Memphis](#)

[September 12: Jackson](#)

TIME: 2 Sessions Offered at Each Location: AM (8:15 — 11:15) PM (1:15 — 4:15)

Each session is limited to 20 participants. Sessions and/or locations with low enrollment may be canceled.

TRAINING NEWS

2019 LRN WORKSHOP

DESCRIPTION:

The Laboratory Response Network (LRN) workshop is a full day course (9:00 AM—3:30 PM *local time*) that covers a variety of clinical microbiology laboratory topics. Topics have been selected from suggestions from laboratorians across the state and include: Bioterrorism, High Consequence Pathogens, Foodborne Illness, Influenza and Antibiotic Resistance. *Lunch will be provided. Lodging and travel expenses are not covered.*

AUDIENCE:

Clinical/Medical Laboratory Scientists and Medical Laboratory Technicians working in microbiology laboratories in Tennessee. CE Credit will be provided for TN Lab Licensure Renewal.

DATES/LOCATIONS:

[June 25 Nashville](#)

[July 17 Memphis](#)

[August 9 Knoxville](#)

2019 BIO-THREAT PREPAREDNESS: RULE OUT OR REFER WORKSHOP

DESCRIPTION:

This intermediate-level, hands-on, all-day workshop focuses on practical methods that clinical microbiology laboratories can use to remain alert for the agents of bioterrorism. Participants will learn about surveillance and evaluation procedures that can be integrated into the routine work of the clinical microbiology lab. Procedures for the referral of suspect cases will also be discussed. Following appropriate safety precautions, participants will examine actual cultures and organisms in a laboratory setting. *Lunch will be provided. Lodging and travel expenses not covered.*

AUDIENCE:

Medical Laboratory Scientists and Medical Laboratory Technicians working in microbiology laboratories in Tennessee. *Limited seats available for each date.* Application does not guarantee acceptance. Participants will be selected according to the applicants' job description, experience and responsibilities. CE Credit will be provided for TN Lab Licensure Renewal.

LOCATION: Nashville, TN**DATES:**

[Thursday June 13](#)

[Friday June 14](#)

[Thursday September 26](#)

[Friday September 27](#)

EMPLOYEE NEWS

NEW EMPLOYEES

DECEMBER 2018

Nicholas Vincent—PH Lab Scientist 1—*Newborn Screening*

JANUARY 2019

Tabatha East—PH Lab Manager 4—*Assistant Director, Clinical Microbiology*

MARCH 2019

Jamie Raby—PH Lab Scientist 1—*Knoxville Regional Laboratory*

PROMOTIONS

DECEMBER 2018

Lawrence Pastor— PH Lab Scientist 1—*Newborn Screening*

JANUARY 2019

Amanda Uhls—PH Lab Scientist 2—*Immunoserology*

Maya Spann—PH Lab Scientist 2—*Enteric Microbiology*

Misti Harris—PH Lab Scientist 2—*Knoxville Regional Laboratory*

Ashley Carroll—PH Lab Manager 2—*Knoxville Regional Laboratory*

Amanda Grider—PH Administrator 1—*Administrative Assistant Director*

MARCH 2019

Marquetta King—PH Lab Technician 2—*Newborn Screening*

Fiona Retzer—PH Lab Scientist 2—*Molecular Sequencing*

Tennessee Department of Health
Division of Laboratory Services

630 Hart Lane
Nashville, TN 37216
615-262-6300



The Mission of Laboratory Services is to provide high quality analytical services of medical and environmental testing and to achieve the Mission of the Department of Health.

<https://www.tn.gov/health/health-program-areas/lab.html>



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