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***Brucella abortus* RB51 Exposures**

The Centers for Disease Control and Prevention (CDC) has advised Laboratory Response Network (LRN) laboratories 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. The County of San Luis Obispo Public Health Laboratory is an LRN confirmatory laboratory fully capable of identifying *Brucella* species isolates.

A person who drank raw (unpasteurized) milk from this dairy was diagnosed with brucellosis caused by *Brucella abortus* RB51. This strain is the *Brucella* vaccine strain used to immunize livestock in the United States.

Milk samples from the dairy have also tested positive for *Brucella abortus* RB51. As of January 22, 2019, 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. Blood culture is the recommended diagnostic test for exposed symptomatic individuals. Clinical laboratories should be aware of possible submissions for *Brucella* cultures in an effort to decrease the potential for laboratory exposures and should review the identification of *Brucella abortus* RB51, which differs slightly from other *Brucella abortus* species.

When handling suspected *Brucella* samples, increased biosafety practices should be implemented to minimize laboratory exposure. Samples should be manipulated within BSL-2 facilities using BSL-3 practices with all sample manipulations within a Class II (or higher) certified biosafety cabinet.

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). *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 cannot be confirmed as *Brucella abortus* RB51

should be immediately forwarded to the closest LRN laboratory.

Measles Outbreaks Nationwide and Worldwide

ProMed reports multiple measles outbreak sites in Clark County, Washington, a suburb of Portland, Oregon. Fifty-five cases have been diagnosed in the county. Additional cases have been detected in nearby King County, Washington; Multnomah County, Oregon; and Portland. Cases have also been reported in California, Colorado, Connecticut, Georgia, Illinois, New Jersey, New York, and Texas. A few examples include:

- Los Angeles County officials confirmed one case in a person who recently visited Malibu, Pasadena, and Santa Monica.
- New York City has reported 67 confirmed cases in the Orthodox Jewish community in Brooklyn since October 2018, while New York state authorities have reported cases in the lower Hudson River Valley.
- Denver public health officials reported a case on January 16 of an individual who had just returned from international travel, while Colorado state public health officials are investigating possible importation of other measles cases from Mexico.

On the international scene, major outbreaks are occurring in Madagascar and the Philippines. Tens of thousands of cases occurred in Europe in 2018 in a broad band that extended from Russia to Iceland and south to Malta in the Mediterranean Sea.

In many areas where access to the vaccine is limited or resistance to immunization is high, the entry of a single case can result in a wildfire outbreak.

The virus can be transmitted up to four days before symptoms of infection appear, making it one of the most contagious disease known. Control of an outbreak is especially difficult for public health staff as there is a need to not only isolate the sick but also to quarantine the well to prevent transmission. Tracking the many exposed contacts that a presumably well individual can have in a few days can exhaust disease intervention staff in a short period of time. The public may not grasp the severity of illness in youngsters and the risk of death from measles in this age group.

Rash illness cases—especially with exposure to a known measles case—should prompt inquires with the communicable disease program staff at the Public Health Department: 805-781-5500 M-F 8-5, and after hours at 805-781-4553.

Rapid, reliable Measles PCR testing is performed by the Public Health Laboratory staff in the space of a few hours.

For collection supplies, contact the laboratory at 805-781-5507.

Holiday Hours

The County of San Luis Obispo Public Health Laboratory will be closed:

- Monday, February 18, Presidents' Day

Our courier pick-up will resume on the next scheduled business day.

Questions? Please contact the Laboratory Director at 805-781-5512 or jbeebe@co.slo.ca.us.

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