

Date: March 25, 2019
To: Alberta Health and Wellness, Infectious Disease Physicians, Medical Officers of Health, All Physicians, Alberta Micronet, Infection Prevention and Control, and Laboratory Directors and Managers
From: Alberta Public Laboratories (APL) - ProvLab
Re: Changes in Ordering California Serogroup Virus Testing

PLEASE POST OR DISTRIBUTE AS WIDELY AS APPROPRIATE

Key Message:

- Requests for serology testing for the California serogroup viruses are referred to the National Microbiology Laboratory (NML), Winnipeg.
- The NML have recently revised their criteria for sample submission and required clinical information which are specified in Specimen Submission.

Background & Importance:

The California serogroup viruses, Jamestown Canyon, California encephalitis, Snowshoe hare, trivittatus and La Crosse, are enveloped, segmented RNA viruses in the *Bunyavirus* genus, and transmitted by various mosquito species. Infections can be either asymptomatic or manifest as a non-specific febrile illness to meningitis and encephalitis and should be considered in the differential diagnosis during mosquito season as cases have been described across Canada and the United States. The incubation period ranges from 5 to 15 days after a mosquito bite.

The laboratory diagnosis relies upon the detection of IgM antibody in acute and convalescent sera and in the CSF. Positive IgM findings are then confirmed by the plaque reduction neutralization test (PRNT) which may provide the viral etiology. Molecular detection of the virus in the CSF is also available but the yield is much lower than serologic investigations.

Results from single randomly submitted bloods are difficult to interpret and are therefore no longer acceptable.

Specimen Submission:

- Submit either:
 - 0.5 mL CSF AND acute blood collected at onset AND a convalescent blood collected 10 to 14 days after the acute sample. (Bloods should be collected in an SST Gold Top Vacutainer) **OR**
 - acute and convalescent bloods collected at time points described above
- Complete the Zoonotic Serology testing requisition (<https://www.albertahealthservices.ca/frm-20087.pdf>) with clinical history, date of onset, travel (if applicable), and check Jamestown Canyon/Snowshoe hare. Specify if the blood is an acute or convalescent sample

Note: if a convalescent sample is not submitted to the ProvLab within 4 weeks after the acute blood is received, no testing will be performed

Inquiries and feedback may be directed to:

Dr. Kevin Fonseca, Clinical Virologist (403) 944-1263; e-mail kevin.fonseca@albertapubliclabs.ca

Dr. Saugata Choudhury, Clinical Microbiologist (403) 944-4924; e-mail Saugata.Choudhury@albertahealthservices.ca

This bulletin has been reviewed and approved by:

Dr. Graham Tipples, Medical/Scientific Director, ProvLab