

# WVDL FALL NEWSLETTER

October 2024



## Wisconsin Veterinary Diagnostic Laboratory

UNIVERSITY OF WISCONSIN-MADISON

### MESSAGE FROM THE DIRECTOR

#### Autumn News From WVDL

Greetings from the WVDL! As always, the Fall months are quite busy for everyone with different meetings, the start of the academic semester, and World Dairy Expo. We appreciate you reading our quarterly newsletter and invite feedback to help WVDL serve you better. Our new laboratory information management system (LIMS), Core One For Labs (COFL), is running well. We want to thank all our clients and stakeholders for their patience and flexibility as we optimize COFL's



performance. Please contact us for assistance with online submissions and automatic data upload and downloads.

WVDL continues to be at the forefront of the H5N1 Influenza A outbreak in dairy cattle, providing new information to continue moving the national response forward and making sure we are prepared to respond to surge testing. The explosion of cases in southern California is starting to move north, and we continue to support preparations for enhanced biosecurity and options for surveillance testing. The national consensus is that the ultimate goal is virus elimination in dairy cattle, starting with effective and cohesive data-driven bulk tank milk surveillance.

Our bovine genetics export meeting is 12/5/2024 from 9:30-2:30pm at the Madison Laboratory (445 Easterday Lane). This meeting is free, and we offer 5 hours of CE. This meeting is an excellent way to catch up and ask questions for AI, ET, and IVF professionals. We always have a great mix of veterinarians, technicians, and logistics staff. The agenda will be finalized soon, so watch your email for RSVP and the schedule of events.

Enjoy the cooler weather!

Keith

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## CLIENT SERVICES

### New Blood Sample Collection Tubes Available

WVDL now is offering 8ml serum separator tubes with the gel separator. These tubes are made of break-resistant plastic, are very affordable, and work well with laboratory automation equipment. We will continue to offer the 6ml no additive tubes for ear notches and the 6ml EDTA tubes for molecular testing.



These can be ordered the order form found here: [WVDL Blood Collection Tube Order Form](#)

### Client Portal Features in CoreOne For Labs (COFL)

WVDL is excited to be working with the new laboratory information system, CoreOne For Labs (COFL). WVDL values our customers highly and is dedicated to providing exceptional customer service. Please let us know of any difficulties and/or struggles you are having with the COFL system. As a reminder, automatic sample received receipts, and preliminary reports are no longer going to be sent out by email, but they are available in real time through the [COFL Client Portal](#).

Some features you will find in the client portal:

- Submit samples for testing
- Receipt of submissions
- Preliminary results
- Finalized reports

You do not need to submit via portal to view updates on your samples and testing. For troubleshooting issues with the COFL Client Portal please visit the [COFL Portal Recourses page](#) for more information. If you are experiencing issues with COFL, please let us know, so that these issues can be identified and addressed appropriately.

We appreciate your efforts in learning this new LIMS, your patience with it, and any feedback on the COFL system. Please feel free to reach out to WVDL anytime with questions, comments, and/or concerns by phone (608)262.5432 or email - [info@wvdl.wisc.edu](mailto:info@wvdl.wisc.edu).

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## PATHOLOGY UPDATE

### **Additional Fee for Captive Cervids Submitted Without an Official ID at WVDL**

WVDL will begin charging \$20 per farmed cervid head or carcass that is submitted without an Official ID for Regulatory Sample Collection. This fee will cover the cost of the tag and administrative costs associated with applying and recording the Official ID. This change is to ensure that all animals that are submitted to WVDL as a whole carcass or head are in compliance with the [DATCP Farmed Cervid Official Identification Requirements](#).

WVDL highly encourages all clients/owners to apply an Official ID tag prior to submission.

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## SEROLOGY UPDATE

### **ELISA Antibody Testing for Influenza A on Cattle Blood and Milk**

WVDL will begin offering antibody testing for Influenza A on cattle blood and milk samples in November 2024. This antibody ELISA is directed to the nuclear protein of influenza A and is a multispecies assay. WVDL was part of the validation of this test for cattle, and we are excited to have it as a tool for veterinarians and animal owners.

Serum and/or milk can be submitted on ice for this testing with the Influenza A in Livestock submission form. Premises ID is required. Please submit milk samples in a screw-top container and send at minimum 15 mls of raw milk.

This test is not specific to the circulating H5N1 B313 strain in dairy cattle, but no other influenza A strains are currently circulating in dairy cattle. The best test to find definitive proof of infection of the H5N1 strain is to submit milk samples for PCR and sequencing of a detected or positive result. No positive herds or cattle have been detected in Wisconsin at this time. For a current list of

states with affected dairies, see this link: <https://www.aphis.usda.gov/livestock-poultry-disease/avian/avian-influenza/hpai-detections/livestock>

Influenza A in cattle is a reportable disease and all results will be messaged to NAHLN and DATCP. Please contact DATCP ([DATCP Home Highly Pathogenic Avian Influenza \(H5N1\) in Dairy Cattle \(wi.gov\)](#)) before submitting testing for guidance on what actions could be taken with a positive ELISA test of a bovine in Wisconsin.

This ELISA test is not appropriate for pre-movement testing, and should be tested on individual animals (no bulk tank, no pooled samples). The cost of ELISA testing will be covered by the submitting client, unless samples are submitted as part of the national voluntary surveillance program which then make them eligible for reimbursement from the National Animal Health Laboratory Network (NAHLN).

How can diagnostic tests be used for H5N1 in dairy cattle? Very little is published about the utility of diagnostic testing for the H5N1 outbreak in dairy cattle. This information will change over time; much of it is from preliminary data.

- PCR is our gold standard test for surveillance and clinical animals. If you suspect clinical disease with H5N1, please contact your state animal health official for guidance and testing. In Wisconsin, this is Animal Health at DATCP. PCR testing of milk will likely be positive 14 to 16 days BEFORE the onset of clinical signs in the herd and will be positive for at least 30 days after the first clinical signs are found on the farm. Data from herds in Colorado suggests that a herd could be PCR-positive for, on average, 67 days. WVDL can perform individual and bulk tank milk testing for H5N1.
- ELISA on milk or serum is typically positive within 7 days of the onset of clinical signs in the cow. This rapid seroconversion is likely because the cow has been infected for 1-2 weeks before the onset of clinical signs. An ELISA positive is indicative of exposure and/or previous sickness.
  - We do not know how long cows will be seropositive after infection.
  - We do not know how long exposure immunity will last.
  - Our preliminary work suggests that depending on test results for both PCR and ELISA, along with the history of infection in a herd or the individual cow, we may be able to predict if the cow or bulk tank milk has infective (culturable virus). Our colleagues at Iowa State University are using this data to help stage the time course of the disease. This is preliminary data and needs future study.

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## VIROLOGY UPDATE

### Serum neutralization: Screening vs. Endpoint Testing

With the advent of COFL, serum neutralizations will be routinely screened and reported at the screening dilution listed in the chart below. If a screen result is POS @ 1:8, that is the endpoint. If a screen result is  $\geq 1:8$  (BVD 1 & 2, EHD 1 & 2, BHV-1 OIE method), then we could add on an endpoint



test and titer the sample out to the endpoint dilution (see chart below). If an endpoint dilution is desired, that test code must be specifically requested on the submission form.

Note that any acute and convalescent paired samples should use the "Endpoint" test code for BVD (code 40121) & IBR SN (code 40056).

Assay	Screening test code	Screening dilution	Endpoint test code	Endpoint dilution
BVDV 1 & 2 SN	40108	1:8	40121	1:8192
EHDV 1 & 2 SN	40134	1:8	40147	1:8192
VSV SN *Any result POS @ $\geq$ 1:32 is referred to NVSL for confirmation.	40160	1:32	N/A	N/A
OIE method for BHV-1 (IBR) SN	40069	1:8	40082	1:2048
BHV-1 (IBR) SN* *Should only be used for diagnostic or abortion cases.	N/A	N/A	40056	1:8192

Test Code - Test Being Requested

- 40108 - Bovine viral diarrhea virus Type 1 & 2 Serum Neutralization (screen)
- 40121 - Bovine viral diarrhea virus Type 1 & 2 Serum Neutralization (titered to endpoint)
- 40134 - Epizootic hemorrhagic disease virus Type 1 & 2 Serum Neutralization (screen)
- 40147 - Epizootic hemorrhagic disease virus Type 1 & 2 Serum Neutralization (titered to endpoint)
- 40160 - Vesicular stomatitis virus strain New Jersey & Indiana Serum Neutralization
- 40069 - Bovine herpesvirus Type 1 Serum Neutralization (OIE Method)
- 40082 - Bovine herpesvirus Type 1 Serum Neutralization (OIE Method) (titered to endpoint)
- 40056 - Bovine herpesvirus Type 1 Serum Neutralization (titered to endpoint)

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## ANNUAL WVDL BOVINE GENETICS MEETING – MARK YOUR CALENDARS

Please mark your calendars for the upcoming Annual WVDL Bovine Genetics Meeting held at the WVDL on December 5, 2024. More information will be forth coming soon to secure your spot at the meeting. Hope to see you there!

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### Contact Us

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Reliable Results and Exceptional Customer Service*

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