

WVDL Quarterly Newsletter - Winter, 2021

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**Wisconsin Veterinary
Diagnostic Laboratory**
UNIVERSITY OF WISCONSIN-MADISON

2021 Winter Newsletter

Message from the Director

Hello from WVDL, we all hope that you and your families continue to stay safe and had a chance for some downtime over the holiday season. We have been working on some large projects and continue to have a strong caseload from animal health and human COVID-19 testing for UW-Madison Campus. There are a few news items that I would like to draw your attention to in this newsletter. First, our Board of Directors approved a 3% fee increase, starting July 1, 2021.

Fee changes are tied to the consumer price index and are also affected by supply chain and other costs of doing business, which have been quite volatile in 2020. Second, we are changing our laboratory information management system (LIMS) away from UVIS to a program called iLES in late spring of this year. This will be web based and will streamline much of the interfaces that clients and staff use to submit, perform, report, and bill for diagnostic testing. Finally, be sure to check out the section testing updates and our staff spotlight on Taylor from Client Services. Please do not hesitate to contact with with feedback or questions. We greatly appreciate all feedback to improve our testing and professional services for clients and stakeholders. There is also a link to an online survey in all of our email signatures.



Keith Poulsen, DVM, PhD
Director

Passive Immunity in Calves

Testing for Passive Immunity in Calves

Successful transfer of passive immunity to newborn beef and dairy calves is essential for their

health and well-being. The success or failure of the colostrum management program is often monitored by measuring the concentration of bovine IgG in diagnostic samples. The WVDL can test both colostrum and serum for bovine IgG using a technology known as radial immunodiffusion (RID). The testing is done at the WVDL- Barron location. Recently, the interpretation guidelines for both serum and colostrum has changed. The WVDL has changed its test result reporting format to match the new national standards. If you have any questions about the new standards, please contact Dr. Don Sockett or Dr. Ryan Breuer at WVDL-Madison.

Interpretation of IgG results for bovine colostrum and serum¹

Colostrum

Low Quality: ≤ 49.9 g/L

Moderate Quality: 50.0 – 72.9 g/L

High Quality: ≥ 73.0 g/L

Serum

Excellent: ≥ 25.0 g/L

Good: 18.0 – 24.9 g/L

Fair: 10.0 – 17.9 g/L

Poor: < 10.0 g/L*

*Complete Failure of Transfer of Passive Immunity is defined as a 1-10 day old calf that has a serum IgG concentration of less than 10.0 g/L. Ten g/L is the same as 1,000 mg/dL or 10mg/mL.

¹Lombard J, N. Urie, F. Garry et al. Consensus recommendations on calf-and herd-level passive immunity in dairy calves in the United States. J Dairy Sci. 2020 103(8):7611-7624

Microbiology

Salmonella Tube Testing no longer offered at WVDL-Barron

The WVDL Barron lab has discontinued the Salmonella tube test as of September 1st, 2020. The low volume of test submissions received at the WVDL as well as the time and cost to continue to perform quality control on the reagents has led the WVDL to discontinue offering the test. Samples received at the lab requesting Salmonella tube test will be referred to the National Veterinary Services Laboratory (NVSL) in Ames, Iowa. Salmonella plate agglutination test on serum will continue to be offered at the WVDL Barron lab.

Brucellosis Testing for Cervids will be performed using BAPA test

Recently, the State Veterinarian approved the use of the Brucellosis buffered acidified plate antigen (BAPA) for cervid samples. The National Veterinary Services Laboratory (NVSL) recommends the BAPA test for cervid Brucellosis testing. The confirmatory test for the BAPA is the fluorescent polarization assay (FPA) of which both are available at the WVDL.

Shipping genital washing samples in the winter

As a reminder that genital washings sent in either the Weybridge Transport Media for *Campylobacter fetus* subspecies *venerealis* culture or Trich InPouch™ for *Tritrichomonas foetus* culture and PCR (if prior to 24 hour incubation) need to be kept approximately at room temperature during shipment. Please always ship overnight, add hand-warmers, if needed, which should be kept away from direct contact with the samples and in an insulated shipping container to maintain ambient temperature. Please call the WVDL if you have any questions or concerns with your shipping process for these samples.

Weybridge Transport Media Supply

As the pandemic continues, there are shortages in particular supplies such as plastics. Although, the WVDL is meeting demand for Weybridge Transport Media, we ask that clients who are requesting large orders of Weybridge, please email us your immediate needs, which are what you plan to use in the next 2 weeks, and then what you would desire your full order to be. This will allow us to fill orders for more clients and monitor our supplies more easily. If you have any questions, please contact the Microbiology Section at the WVDL.

Staff Spotlight:

Taylor Truttmann, Client Services

1. Where are you from? What high school and college/university (if attended) did you graduate from? What are your degree(s) in?

- Hello! I was born and raised in Green Bay, Wisconsin. I attended UW Oshkosh for a few years (planning to major in chemistry), but then after taking a summer class in Madison in 2013, I realized that Madison was where I really belonged. I transferred and ended up graduating with a BS in English with a Creative Writing emphasis.



2. What is one thing on your 'Bucket List'?

- I've always wanted to adopt two old pair-bonded cats because they seem the least likely to get adopted. I come from a family of extreme cat lovers—mostly inspired by my dad. He's a huge softie.

3. What book(s) are you currently reading?

- I just finished reading *A Woman Is No Man* by Etaf Rum, a semi-autobiographical novel about the deeply complicated and sometimes dark aspects of traditional Arab culture (10/10 recommend). My bookshelf is heavily weighted towards women, but I'm also a huge fan of Tolkien and George R.R. Martin.

4. What is the one food that you will never bring yourself to eat?

- That's a tough question! I'm a pretty adventurous eater. And even though I prefer to eat vegan, I still have my exceptions. I guess my answer is anything that I consider 'ego eating,' like a pie eating contest or a mukbang or the hottest pepper or hot sauce. No thank you.

5. What is your favorite movie soundtrack?

- *Into the Wild* by Eddie Vedder. No contest.

6. If you could play the lead role in any movie, which character would you choose?

- Either Frodo or Bilbo Baggins—though of course I'd need a genderbend! The movies were shot in beautiful locations with great costuming. It just seems like a blast. Plus I already feel a bit like a hobbit due to my short stature and enjoyment of second breakfasts.

7. What three flavors of ice cream would be on your triple scoop cone?

- Well the first is easy: Zoreo by The Chocolate Shoppe here in Madison. It's honestly the only version of chocolate ice cream I've ever liked. Then Blue Moon because I'm a true Wisconsinite. The last would be butter pecan.

8. When you were a child, what or who did you want to be when you grew up?

- When I was really young, a paleontologist. I know, super unique. Then throughout grade school I wanted to be a teacher. I guess that means I had good teachers! I also liked that they seemed to know a little bit of everything. I identify more with the jack of all trades than the master of one.

9. What pets did you have growing up?

- We got our cats when I was nine. Two brothers from the same litter, Peekaboo and Midnight. We thought they were girls at first, so I named Peekaboo after the cat in the *Rose Is Rose* comic strip. Midnight got fat and loved to curl up next to me in bed. They both died in 2019 about six months apart from each other. Now my parents host a wild/outdoor cat oasis on their back porch—complete with food, a heated water bowl, an insulated hidey hole, and a trail cam to watch it all happen. So far they've got eight neighborhood cats that frequent the place.

10. What skill would you like to master?

- Spanish. I can read and write it pretty well, but speaking it remains elusive.

11. What is your biggest pet peeve?

- I've heard that what you find annoying in other people is actually what you yourself are insecure about. So these days I try to have fewer pet peeves and more self-compassion.

12. Best concert you ever saw?

- Oh boy. I'm really going to expose myself with this one. A Day to Remember and Bring Me The

Horizon in Chicago in 2010. I was a big emo kid in high school, and somehow I lucked out and my two favorite bands toured together. I remember just belting out every single word and jumping around and pumping my fists. Not caring how stupid I might've looked. It was like a religious experience. Check out "If It Means A Lot To You" by A Day to Remember. It's one of their more popular and less-screamy songs.

13. If you could be any animal in the world, what animal would you be and why?
 - My fursona? I'm gonna surprise you all and say dog... Haha just kidding! It's a cat and you knew that already. As for why... hard to say. It's just in my blood.
14. What led you down the career path you are on?
 - The career path I'm on is a meandering one. I've either been or studied to be a number of vastly different things: biochemist, editor, restaurant manager, receptionist. I think what led me down this path is a desire to do and be a little bit of everything. A jack of all trades. I really like where I am now, and I'm excited to see what I'll be capable of when I turn the next corner.

Virology & Molecular Diagnostics

Diagnostic / Surveillance / Export testing:

Influenza D testing

Influenza D virus (IDV) is a new genus within the *Orthomyxoviridae* family, and is distantly related to the previously characterized human Influenza C virus. Although first identified in pigs (D/swine/Oklahoma/1334/2011), studies have since suggested cattle as the natural reservoir and that cattle infected with Influenza D may contribute to the development of bovine respiratory disease.

WVDL has recently completed validation of Influenza D by PCR and will be offering this assay as of 1/4/2021. It is a stand alone test and run along with the Bovine Respiratory PCR panels on M/W/F. The test code is FLUDPCR and is \$36.41/sample in state.

EHD AGID Assay

WVDL is in the process of evaluating a NVSL developed EHD AGID assay. NVSL submitted their validation work for approval in Dec. 2020. The WVDL is targeted to offer this test as soon as NVSL reagents are ready for purchase, hopefully in January.

EHD serology testing update

WVDL and NVSL are working on side by side comparison. Additional validation work is in progress. We are seeking NVSL support to obtain USDA approval for our EHD ELISA test for export testing.

SARS-CoV-2 in animals

In October, WVDL tested mink suspicious of SARS-CoV-2 positive from two mink ranches. They tested presumptively POS, and were confirmed at NVSL. WVDL continues to perform weekly SARS-CoV-2 PCR on animals as part of a cooperative agreement with the CDC. From April to December 2020, we tested 464 animals, with 58 presumptive positive (some of the household pets with low level of virus were not able to be confirmed by NVSL).

NAHLN Notes

- As part of the 2020 Farm Bill, APHIS awarded \$5.1 million in support of 30 projects from 21 NAHLN laboratories in 21 states that enhance test method development for high consequence animal disease, emergency preparedness, data management and exercises/drills for laboratories. The WVDL Virology section received \$72,366 for the validation of KingFisher Duo Prime for low-throughput nucleic acid extraction platform to enhance capacity for rapid NAHLN scope disease testing.
- On Sept 29 -30 2020, WVDL participated in an exercise scenario to practice the Emergency Validation Process which can be used to validate a new sample type after a foreign animal disease detection/outbreak. WVDL performed this for the use of bulk tank milk as a sample type for FMD detection.

WVDL Outreach - Nepal

- Jared Van Thiel (current WVDL microbiologist) and Francine Cigel (retired WVDL employee) traveled throughout Nepal for several weeks to help establish and improve SARS-CoV-2 PCR testing in conjunction with a WHO Global Outbreak Alert and Response Network Mission. Dr. Lim was a remote consultant for this mission.

Client Services

Reminder about the WVDL-UPS Shipping Program

The WVDL has partnered with UPS to provide discounted shipping options for sending samples to the laboratory. There are many advantages to the program including affordability, efficiency and consistency. Shipping labels can be emailed to you or printed and sent to you. The shipping costs are added to your account and billed at the end of the month. It is important to note that shipping with the U.S. Postal Service (USPS) could possibly lead to a delay in results as both the Madison and Barron locations receive daily UPS shipments earlier than USPS. **UPS will pick up at your location at no charge to you.** This is a part of the agreement the WVDL has with UPS. You can use the 'pick-up' link in the email that contains your shipping label or schedule online at https://wwwapps.ups.com/pickup/schedule?loc=en_US. Same-day pick up time is dependent on the location so it is best to plan ahead. Otherwise, shipments can be given to any UPS driver either during an already scheduled pick up or during a delivery. Additionally, there are many convenient UPS locations or drop boxes which can be found at <https://www.ups.com/dropoff>.

Saturday Delivery

A reminder that the Madison location **DOES** accept UPS Saturday Delivery, but a special \$30.00 flat rate shipping label must be purchased online and emailed to you. Remember to mark the 'Saturday Delivery' option box.

For more shipping information, please see our website:
<https://www.wvdl.wisc.edu/index.php/shipping-information/> or call the WVDL.

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