

**Wisconsin State Laboratory of Hygiene
Board of Directors Meeting
March 19, 2019**

**APPROVED MINUTES
December 18th, 2018
1:00 P.M. – 4:00 P.M.
Wisconsin State Laboratory of Hygiene
2601 Agriculture Drive
Madison, WI 53718**

MEMBERS PRESENT: Chair Dr. Richard Moss, Vice-Chair Dr. Robert Corliss, Secretary Dr. Jamie Schauer, Jeffery Kindrai, Charles Warzecha, James Morrison, Steve Geis, Gil Kelley

WSLH STAFF PRESENT: Dr. Daniel Kurtycz, Dr. Allen Bateman (for Dr. Peter Shult), Dr. Nicholas Florek, Ann Valley, Christine Gunter, Jim Sterk, Kevin Karbowski, Cynda DeMontigny, Meshel Lange, Allen Benson, David Webb, Jan Klawitter, Noel Stanton, Kristine Hansbery, Steve Strebek, and Nathaniel Javid

DNR STAFF PRESENT: Zana Sijan

GUESTS PRESENT: None

Chair Dr. Richard Moss called the meeting to order at 1:00 P.M.

Item 1. ROLL CALL

Chair Dr. Richard Moss initiated the roll call of the Board. All Board Member seats or designated representatives were present except Barry Irmen.

Item 2. APPROVAL OF MINUTES

Approve the minutes of the September 18, 2018 Board Meeting as submitted. Steve Geis noted that a correction for his attendance placement under "Members Present" should be made.

Jeffery Kindrai made a motion to approve the minutes with the aforementioned correction.

Steve Geis seconded the motion. The voice vote approving the corrected minutes was unanimous.

Item 3. REORGANIZATION OF AGENDA

There was no reorganization of the agenda.

Item 4. PUBLIC APPEARANCES

There were no public appearances.

Item 5. BOARD MEMBERS' MATTERS

Chuck Warzecha noted that with the transition of officers happening at the next Board meeting, we should confirm the appointment of other members. Dr. Schauer confirmed that everyone's appointments not up for election will continue with the terms of their appointment.

Item 6. FINANCIAL REPORT

- **Kevin Karbowski, Chief Financial Officer, Wisconsin State Laboratory of Hygiene**

Mr. Karbowski provided the budget report for the period of July 1, 2018 through October 31, 2018. Mr. Karbowski noted that although our FY19 net operating income was budgeted at \$351,520, our year-to-date actual net operating income is \$560,861. Much of this is due to timing. We experienced a significant under-budget variance with the Department of Natural Resources that we expect to disappear on the November report. However, we've experienced an unexpected additional variance of \$23,668 due to increased activities with the University's School of Medicine & Public Health and University Health Services. Clinical revenue is also up by 10.5%. This is largely due to an increase in our lead testing activity and additional clinic support due to flooding. We expect the large negative amount in environmental testing revenue to clear in the next several months.

We also eliminated two pieces of equipment before their useful life was complete. This is reflected on the report. We expect to be close to our projected income by the end of the year. This is because we anticipate clinical will be over revenue and environmental will be under revenue. Our available working capital of \$9,806,069 as of October 31, 2018 is up by \$136,389 compared to what it was on June 30th.

Item 7. STRATEGIC PLAN UPDATES

Biomonitoring: LRN-C (Laboratory Response Network for Chemical Threats)

- **Noel Stanton & Meshel Lange, WSLH Environmental Health Division**

The Chemical Emergency Response Program (CER) is a relatively new program at the WSLH. Chemical Emergency Response preparedness is focused on several roles: these include human exposure testing for weapons of mass destruction and other identified threat agents including nerve agents, vesicants, metals and pesticides. The CER also provides support for emergency responders including training materials and serving as a reference lab. Reference materials and proficiency testing are also provided. Our support extends to other units for testing and instrumentation. The LRN-C (lab response network for chemical events) is CAP

accredited to provide chemical threat responses. Laboratories are classified by level and the WSLH is a level-1 laboratory and serves as a surge capacity lab for the CDC. We also have the capabilities to respond to new threats. Mr. Stanton reviewed cases the LRN-C has handled with regards to rat poison and synthetic cannabinoids. These cases started in Illinois and spread to Wisconsin among other states. Ultimately, twelve states are involved in these cases (approximately 320 total), with eight fatalities. Because testing capability was extremely limited, the WSLH has developed a quantitative diagnostic test, not just to detect presence/absence, but also to determine a concentration. As a result, exposures have been verified in nearly all of the Wisconsin placements. This was viewed as an emergency response, so LRN-C resources were used. We are planning follow-up testing for elimination rate and threshold for coagulopathy. Mr. Stanton turned the presentation over to his colleague, Meshel Lange to discuss outreach and related activities. Ms. Lange discussed emergency response support. This is largely focused on state-asset hazmat. These include addressing unknown substance incidents, providing 24/7 response, and providing unknown identification (e.g., hazmat sample collection kits and air canisters). Emergency responder support also includes liaison work with partner agencies such as the FBI, CDC, and EPA on the federal level and DHS and DNR among others on the local level. The WSLH also serves as a reference lab for the 54th civil support team (which has the greatest capability response in our state for any emergency of this nature). The WSLH performs Hazmat outreach and training, which includes unknown substance sample collection, FTIR & Raman Spectroscopy training for responders, and laboratory awareness training. We even received a threat response in Wisconsin that involved Washington D.C. Capitol Police. We have also been involved in law enforcement engagement with Madison, WI Capitol Police and have training scheduled for 2019. We also are conducting outreach through our Wisconsin Emergency Drinking Water Collection Kit. This involves collaboration with the DNR including some regional meetings scheduled for 2019. Ms. Lange next described the equipment loan program (ELP), which serves as an equipment library for state and local agencies including the DNR, LPH, UW and DHS (co-managed with DHS). There is a variety of instrumentation available for this including mercury in air, VOCs, indoor air quality, ammonia, meth lab residue, carbon monoxide, and radon. We have recently received funding to add more equipment and replace old equipment.

Dr. Schauer reiterated that a lot has evolved regarding what the needs are at the CDC and APHL since our strategic plan was formed. LRN-C is a major effort to deal with opioid abuse and we are developing these capabilities with their direction. We have also applied to serve as a national biomonitoring network through APHL. There are a lot of growth opportunities being pushed at the federal level, and this fits with our strategic plan. Jeffery Kindrai noted that his department used some of this equipment through DHS and it has worked very well.

Outreach Communications

■ Jan Klawitter, WSLH Public Relations

Ms. Klawitter, WSLH Public Relations Director, noted that the three principles of the outreach initiatives are 1) building on the WSLH and UW educational missions, 2) increasing awareness of WSLH activities, and 3) increasing public and private sector awareness of our services and partnerships and collaboration opportunities. Our year one goals were to administer a survey for our leadership gauging our needs and obstacles, reviewing our goals, and developing priorities for the coming year. As of now, we have met these goals via the Outreach Communications Committee. Of the nine questions on the internal survey, the two overriding results were the need for the WSLH to have more training opportunities online and to facilitate an easier-to-navigate website. We wanted to implement three projects in this first year. The first group with

immediate needs was our antibiotic resistance lab group. We implemented an online training video for completing our FedEx form for ARLN. This project took several months to complete but has been met with great success. The next two areas of focus for 2019 include developing a short recruitment video for our cytotechnology certificate program and training for local health departments. The Outreach Communications Committee is also developing a resource spreadsheet so we have contacts for various skills around the lab. Jeffery Kindrai asked if the survey will cover both clinical and environmental areas and Ms. Klawitter confirmed that it will. For the local health officers, we will be gauging what is most important.

Item 8. SCIENTIFIC PRESENTATION

ARLN and Next Generation Sequencing

■ Nick Florek, PhD, and Ann Valley, Communicable Disease Division, WSLH

Dr. Allen Bateman, Assistant Director, WSLH Communicable Disease Division (CDD), introduced Dr. Nick Florek and Ann Valley to the Board. Ms. Valley provided some background on the AR lab network. This deals with what is commonly known as nightmare bacteria, which is highly resistant to antibiotics, shares resistance with other bacteria, and the death rate can be up to 50%. The CDC's antibiotic resistance laboratory network was developed as the CDC's way to combat antibiotic resistance threats nationwide. Wisconsin has \$3,597,408 in funding for AR activities for fiscal year 2017. The main premise of an AR lab network is to detect, prevent, innovate and respond to combat resistance. Ultimately, we will be providing nationwide resistance by working at the local level. Ms. Valley went over the various threats including *Acinetobacter species*, *Candida species*, *Clostridium difficile*, among others. Ms. Valley went over the map of AR lab network regional labs and TB centers. In Wisconsin, the WSLH works on core testing and *S. pneumoniae*. Ms. Valley went over the process for testing. This involves the network of participating clinical laboratories communicating with state and local public health labs (PHLs). The PHLs perform organism identification, confirmatory AST testing, phenotypic screening for carbapenemase production, and molecular detection of mechanisms. If not complete at this point, samples would next go to the regional lab in which confirmatory testing, colonization screening, and targeting surveillance for emerging AR threats is performed. In more serious cases, healthcare-associated infections are passed along to the CDC for confirmatory testing, whole genome sequencing, and applied research. Ms. Valley next went over AR lab network regional lab core testing. Core testing includes CRE/CRPA isolate characterization and colonization screening for carbapenemase producing organisms (CPOs). The colonization screening process starts from the facility lab to state and local lab epidemiologists and ends at the regional lab. Ms. Valley provided historical background on why we were chosen as a regional lab. We began testing for CRE in Wisconsin in 2010. By 2013, we added a culture test along with more resistant mechanisms as testing became available in 2015. In 2016, we were chosen as a regional lab and have added new tests since then. In 2019, there are new markers available for *C. auris*. We will be expanding culture methods for *C. auris* PCR and will be adding a Drug Printer Pilot. Since 2010 we have grown our capabilities significantly. Ms. Valley discussed the expansion of candida testing to all regional labs in FY17. This includes antifungal susceptibility testing for resistant *Candida* such as *C. glabrata*, *C. haemulonii*, and *C. auris*. For

C. auris, we have MALDI-TOF and colonization screening. Ms. Valley presented data on CRE isolate testing in 2018 (901 total) in Wisconsin vs. Non-Wisconsin populations and the breakdown of carbapenemases in Wisconsin in 2018. Ms. Valley also presented on colonization testing (1,859 for the period of January through September of 2018) for the states of Wisconsin, Ohio, Kentucky, Indiana and Illinois. Lastly, Ms. Valley went over a case study in Kentucky in which we performed testing. This began June 29, 2018 and we performed tests through August and by September and October there were no additional cases.

Dr. Nick Florek shifted the presentation to discuss next-generation sequencing. There are three ways you can characterize a microorganism (biochemical, physical, and genetic). For our purposes, we are focused on genetic characterization. Dr. Florek provided copies of gel electrophoresis slides that show the genetic makeup of an organism by increasing genetic resolution. Obtaining more detailed information through next-generation sequencing gives us the necessary information to deal with outbreaks. Put simply, the process involves extracting genomic DNA, following by fragmentation, sequencing, quality control and assembly. The analysis that follows is extremely intensive. For example, one isolate yields 3 million reads. A typical sequencing run has sixteen isolates. For comparison, this is the equivalent of analyzing roughly 1,800 novels. As a result, we need to increase our capacity to analyze results in a timely manner. The focus for this has been on developing a regional resource for bioinformatics, developing expertise (training of wet lab staff and mentoring bioinformatics), and developing computational infrastructure. In the last year, we have seen a lot of advances in sequencing including higher throughput, lower cost, longer read length and higher quality. To tie this back to the ARLN, we have ongoing detection of isolates that are regularly sequenced through resistance detection. We've also performed surveillance of 175 resistant isolates from 2011 to 2018. The most significant aspect has been outbreak investigations, which help provide context and additional data in the determination of outbreak related patients. Another area of importance has been applying sequencing to food illness. In 2017, we performed 750 isolated tests and in 2018 we increased our testing to 1,290 isolates. We have also participated in nine outbreak investigations with the sequencing data we've obtained. For future directions of the WSLH, we want a continued increase in sequencing demand (new robotics for sequencing preparation), training, metagenomics, newborn blood screening, and environmental source tracking. Chuck Warzecha asked how far away the WSLH's capabilities are from the CDC. Dr. Florek responded that the WSLH is fairly comparable to the CDC's as far as capability, especially with our technological connections to the UW. Dr. Schauer reiterated that we are positioning ourselves to be a leader in this endeavor. We also hope to have two bioinformatics scientists by the end of next year.

Item 9. HUMAN RESOURCES REPORT

■ Cynda DeMontigny, Human Resources Director, Wisconsin State Laboratory of Hygiene

Ms. DeMontigny went over the human resources report from September 12th to December 7th of 2018. For recruitments, we have two in the Disease Prevention Division (DPD), four in the Environmental Health Division (EHD), none in the Laboratory Improvement Division (LID), four in the Communicable Disease Division (CDD), one in Administration, and one in the Occupational Health Division (OHD) for a total of 12.

For hires, we had five in DPD, ten in EHD, one in LID, four in CDD, three in Administration, and one in OHD. For resignations, we had two in DPD, three in EHD, none in LID, and one in CDD, none in OHD, and one in Administration. There was one retirement in EHD for this period.

Item 10. CONTRACTS REPORT

■ Christine Gunter, Financial Program Supervisor, Wisconsin State Laboratory of Hygiene

For December 2018, we have received \$3,489,383 in contracts broken down by WSLH division: CDD (\$2,787,832), DPD (\$254,442), EHD (\$117,061), Newborn Screening (\$255,663) and Forensic Toxicology (\$24,385). Broken down by contractor, the funds are \$287,852 with WDHS, \$2,766,557 with WDHS-ELC (CDC), \$11,030 with the WI Department of Justice, \$20,212 with the Iowa DNR, \$231,210 with private companies, \$121,302 with other universities, and \$1,220 international.

Item 11. DIRECTOR'S REPORT

■ Dr. James Schauer, Director, Wisconsin State Laboratory of Hygiene

David Webb, WSLH Environmental Health Division Director, gave an update on the WI Flooding Response. The WSLH sent out over 1,300 kits in response to the flooding in August 2018. Dane, Sauk, Monroe, and Juneau accounted for 95% of the tests that went out. 27% of these tests were positive for total coliform and 6% of those were positive for E. Coli. These are about the standard percentages. We learned a lot through this experience. David Webb thanked Jocelyn Hemming for all of her work in responding to this.

Dr. Allen Bateman, WSLH Communicable Disease Division Assistant Director, noted that the CDC recently developed a new assay for rabies testing. This new assay is very sensitive and specific. There is a national working group for this assay, and the WSLH has some representation on this. The purpose is to come up with general recommendations for implementing this test moving forward. Meanwhile, we will be continuing with the DFA test which effectively meets our needs but are excited for this step forward with real time PCR.

Jan Klawitter reviewed WSLH recent events with the Board including the Wisconsin Clinical Laboratory Network 2018 Regional Meetings, the National Atmospheric Deposition Program Fall Meeting and Scientific Symposium in Albany, NY, the American Society of Cytopathology Shark Tank Competition, and the 2018 National Symposium for Newborn Screening in Shanghai, China. Locally, Ms. Klawitter mentioned some noteworthy WSLH Brown Bag events for employees, the new WSLH employee awards program, and the Wisconsin Science Festival.

The Board reviewed the Water Systems Boil Notice Report for the period of September 1, 2018 through November 2018. In this period, there was one boil notice for Calumet County, four for Racine County, and two for Waukesha County. Dr. Moss asked Ms. Klawitter for a list of the

WSLH employees who won awards, and Ms. Klawitter responded that the winners are listed in the Board packet.

The Board discussed the March meeting date and it was confirmed, as scheduled, for Tuesday, March 19, 2019.

Chair Dr. Richard Moss made a motion to adjourn the meeting at 3:15 P.M. **Jeffery Kindrai** seconded the motion. The motion passed unanimously and the meeting was adjourned.

Respectfully submitted by:

A handwritten signature in black ink, appearing to read "James J. Schauer". The signature is written in a cursive style with a large, prominent "S" at the end.

James J. Schauer, PhD, P.E., M.B.A.
Secretary, Wisconsin State Laboratory of Hygiene Board of Directors