

USAHA/AAVLD COMMITTEE ON DIAGNOSTIC LABORATORY AND VETERINARY WORKFORCE DEVELOPMENT

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The Committee met on October 26, 2019 at the Rhode Island Convention Center in Providence, Rhode Island, from 1-3pm. There were 10 members and 24 guests present. A response to the previous year's resolution was received from the American Veterinary Medical Association a few days before the meeting, and is discussed below under "Committee Business".

Presentations & Reports:

Ms. Barbara M. Martin, Executive Director, World Association of Veterinary Laboratory Diagnosticians (WAVLD) presented **Update on International Efforts**. Ms. Martin could not attend the meeting, so her presentation was given by Dr. Valerie Ragan.

This presentation covered updates on the continued international development of veterinary paraprofessionals (VPP). Outcomes of the OIE *ad hoc* Group on Veterinary Paraprofessionals (VPP) were discussed. VPP documents are available online at:

https://www.oie.int/fileadmin/Home/eng/Support_to_OIE_Members/pdf/A_Competence.pdf
https://www.oie.int/fileadmin/Home/eng/Support_to_OIE_Members/pdf/AF-CoreCV-ANG.pdf

The Global Laboratory Leadership Program Multisectoral Partnership was also presented. Partners developed a Laboratory Leadership Competency Framework and training package for a Global Laboratory Leadership Programme (GLLP) taking a One Health approach. Partners in the effort included:

- World Health Organization (WHO)
- Food and Agriculture Organization of the United Nations (FAO)
- World Organisation for Animal Health (OIE)
- European Centre for Disease Prevention and Control (ECDC)
- U.S. Centers for Disease Control and Prevention (CDC)
- Association of Public Health Laboratories (APHL)

GLLP training focuses on nine core competencies. Those are:

1. Laboratory systems
2. Leadership
3. Management
4. Communication
5. Quality management system
6. Biosafety and biosecurity
7. Disease surveillance and outbreak investigation
8. Emergency preparedness, response and recovery
9. Research

Current Activities of the GLLP include a pilot in Pakistan in October, 2019, and both a pilot in Liberia and a partners meeting in November 2019. In December 2019, a complete initial GLLP Learning Package will be completed. There will be a final review by partners in 2020, and will be published online by the World Health Organization (WHO).

The development of laboratory policy by the Food and Agriculture Organization (FAO) was also presented. This effort was initiated after FAO noted a lack of a clear policy framework for veterinary laboratories in many countries while laboratory capacity was being strengthened. Laboratory policy includes issues such as the delegation of official tests to public or private laboratories, defining the role and mission of national reference laboratories, and others. The effort was initiated in 2013 through a consultative process, and was beta tested in Kenya in 2015. Currently in 2019, a process for finalization is under development.

Finally, the World Association of Veterinary Laboratory Diagnosticians will be meeting June 24-26, 2021 in Lyon, France. A Scientific Committee has been formed, and announcements will be out soon on abstracts submission. Participation is encouraged! For additional information, contact Barb Martin at martin.barbara.m@gmail.com.

Dr. Kimberly Dodd, Director, Foreign Animal Disease Diagnostic Laboratory, Plum Island presented an overview of the APHIS Workforce Development Initiatives, including the **APHIS NBAF Scientist Training Program (NSTP)** and the **APHIS NBAF Laboratorian Training Program (NLTP)**.

The Foreign Animal Disease Diagnostic Laboratory (FADDL) is a national reference laboratory for USDA Veterinary Services and the National Animal Health Laboratory Network (NAHLN), and an international reference laboratory for the Food and Agriculture Organization (FAO) of the United Nations and the World Organization for Animal Health (OIE). FADDL is currently located at the Plum Island Animal Disease Center (PIADC), the only US location approved for handling high-consequence foreign animal diseases (FAD), including foot and mouth disease (FMD) and Rinderpest viruses. The majority of the U.S. FAD diagnostic expertise for livestock diseases resides at PIADC-FADDL, within approximately 20 scientists that include microbiologists, veterinarians, and veterinary scientists (DVM/PhD). The majority of FADDL's subject matter experts (SMEs) will not relocate to the new National Bio and Agro-Defense Facility (NBAF) in Kansas, creating an FAD SME gap throughout the transition process and during stand-up of FADDL at NBAF. Furthermore, the FADDL mission will expand at NBAF to include zoonotic and emerging diseases, with a new emphasis on biosafety level (BSL)-4 pathogens. SMEs knowledgeable in these agents and with expertise in working in BSL-4 laboratories will be critical to develop BSL-4 programs at NBAF. Similarly, FADDL anticipates a gap in trained technical support, including laboratory technicians.

To minimize the anticipated SME and technical workforce gaps and to identify highly qualified candidates to fill key roles in the new NBAF facility, APHIS developed two workforce development initiatives. The first is a graduate training program, the APHIS NBAF Scientist Training Program (NSTP), for trainees interested in pursuing a career with APHIS at NBAF. Applicants for the program must be enrolled in a graduate level (MS, PhD, or DVM/PhD) program at a partner university and in a laboratory-based field of study, including microbiology, virology, molecular biology, diagnostics, and bioinformatics. APHIS will work with partner universities and laboratories to ensure the fellows' research projects address specific FADs and capability needs. Once accepted into NSTP, the fellows will receive funding to cover tuition and fees, stipend, health benefits, materials and supplies, travel, and publication costs, for a period not to exceed 5 years. Upon successful completion of the programs, each fellow will be offered a full-time federal position and required to fulfill a service commitment at NBAF and/or PIADC-FADDL, dependent on agency needs and timing of degree completion. The length of the service commitment will be tiered and determined by the number of years of funding received (for example, 4 years of service are required for 2 years of funding, and 7 years of service are required for 5 years of funding).

Current, APHIS NSTP has enrolled a total of 15 fellows from ten universities, including Kansas State University, Iowa State University, Mississippi State University, North Carolina State University, Auburn University, Tufts University, Colorado State University, Texas A&M University, Louisiana State University and the University of Georgia. Each of the selected individuals have a documented interest in pursuing a career at NBAF across a range of disciplines, from the development of novel diagnostic platforms and bioinformatics to elucidating the possible role of transmission of FADs through contaminated feed. One fellow, from Iowa State University, will complete his PhD research in collaboration with the Canadian Food Inspection Agency (CFIA) in CFIA's BSL-4 facilities; another from Auburn University will complete her PhD in collaboration with the Centers for Disease Control and Prevention (CDC). The NSTP is a nationwide program implemented in coordination with US universities.

Universities interested in partnering with APHIS for the NSTP are encouraged to reach out through NSTP@usda.gov.

The second initiative is the NBAF Laboratorian Training Program (NLTP), a program designed in collaboration with Kansas State University to develop a pipeline of laboratory technicians for work with high-consequence pathogens at NBAF, NVSL-Ames and in other containment laboratories. The program will include initial online coursework to provide broad didactic training in biosafety, biosecurity, Select Agent program, high consequence pathogens and basic laboratory techniques. A subsequent 8-week laboratory training will be held at the K-State Biosecurity Institute (BRI) that will give students an opportunity to gain hand-on experience working in biocontainment. Currently, a total of 10 students will be trained in Summer 2020 and another 10 in Summer 2021, with an option to expand in to future years. Questions regarding NLTP can also be addressed to NSTP@usda.gov.

A PPT is included as an addendum to this report.

Dr. Roxann Motroni, National Program Leader for Animal Health, USDA Agricultural Research Service (ARS) presented **on workforce development efforts and workforce needs for the National Bio and Agro Defense Facility (NBAF) as well as for the ARS animal health program.**

The USDA Agricultural Research Service serves as the intramural research arm of USDA. It houses 690 projects within 16 national programs and employs close to 2,000 scientists. The Animal Health National Program (NP103) delivers scientific solutions for animal health projects. It currently has 38 projects ranging over 7 different research components and has an annual budget of \$80.9M. There are currently 85 scientists within the Animal Health program and 99 students or post-docs currently in training within the national program. The NBAF program falls within the biodefense component of the ARS program along with the Southeast Poultry Research Laboratory (SEPRL), National Animal Disease Center (NADC), Arthropod-Borne Animal Disease Research Unit (ABADRU), Plum Island Animal Disease Center (PIADC) and the Animal Disease Research Unit (ADRU). In order to be prepared for emerging diseases, ARS is committed to maintaining the expertise in a wide range of diseases through training of the next generation of animal health researchers.

In FY17 congress specifically appropriated funds for workforce development for the NBAF. In FY17, ARS partnered with Mississippi State University for training 4 students and in FY18 ARS partnered with Kansas State University to train 3 additional scientists. In FY19, ARS partnered with 3 universities (UConn, Auburn and University of Minnesota) to begin training for 3 additional students. Scientists and veterinarians in the ARS training program are gaining expertise in virology, immunology, epidemiology and bioinformatics. Unlike the APHIS program, ARS does not have the authorities to require a service agreement from funded students, but rather has focused on creating a competitive workforce that can apply for federal positions when they become available. In FY20, ARS plans to continue developing the scientific and operational workforce using the appropriated funds.

A ppt is included as an addendum to this report.

Dr. Michael Gilsdorf, representing the National Association of Federal Veterinarians, presented an **Update on the Federal Veterinary Workforce.**

There is an increase in the total number of Federally employed veterinarians within the United States compared to 2018. The total number employed is now 3216 and increase of approximately 100 individuals. However, this increase is result of an increase in veterinarians hired within the Centers of Disease Control and Prevention located in Atlanta, Georgia. The total number of veterinarians employed with USDA continues to decline. The number of veterinarians within FSIS is only about 900 and they still maintain about an 11% vacancy rate despite the increase of \$7.5 million to hire more veterinarians in 2018. FSIS has not reported how they have used the funds to hire more veterinarians. There is an effort in the current appropriations bill to require that FSIS report their efforts in hiring more veterinarians. The number of veterinarians within APHIS Veterinary Services is a little higher than the number employed in 2018; which was the lowest number in decades. The agency has chronic problems with a shortage of employees within their human resources division that results in much longer timeframes to hire new employees.

In addition, in all USDA agencies including ARS, over 30% of the veterinary workforce has been eligible to retire and they have been retiring in larger numbers.

Federal Administration had proposed to shrink the size of the federal workforce and reshape many federal agencies in 2018 and that process has begun.

There is a bipartisan congressional bill designed to establish an interagency One Health Program. The intent is to:

1. Develop a force readiness number for each federal agency.
2. Work with the Congressional Research Service and Office of Personnel Management to look at the possible gap in response capability

Pass the Advancing Emergency Preparedness through the One Health Act

Dr. Valerie Ragan of the Center for Public and Corporate Veterinary Medicine (CPCVM) with the Virginia-Maryland College of Veterinary Medicine presented on **Developing “Externship” Programs for Veterinarians.**

The concept of an “externship-type” program for practicing veterinarians was discussed as a way to provide more opportunities for veterinarians considering a career change to explore career options that they may have an interest in. Currently, veterinary students have externship opportunities to explore a potential career area, while graduate veterinarians do not. Although many veterinarians are interested in possible careers in public practice, they are often hesitant to apply without knowing more about what those jobs entail. The CPCVM is in discussion with government and industry collaborators about creating “externship-type” experiential opportunities for graduate veterinarians, similar to veterinary student externships. Information received from a national survey of veterinarians interested in a career change shows that veterinarians are excited about the concept, with an interest in unpaid opportunities lasting from one week up to a year.

Initially, two to three week opportunities are being considered, depending on the preferences of the hosting organization. Starting with a pilot program in a few places first before scaling up is envisioned. Veterinarians from organizations interested in participating should contact Dr. Valerie Ragan at vragan@vt.edu.

Committee Business:

The committee also discussed the response received from the AVMA to the resolution sent last year. That resolution stated :” The United States Animal Health Association (USAHA) and the American Association of Veterinary Laboratory Diagnosticians (AAVLD) strongly urge the American Veterinary Medical Association to develop and implement an action plan to lead a public relations campaign with a goal to raise public and professional awareness of the breadth of skills of veterinarians in diagnostic and regulatory medicine and the contribution of veterinary medicine to public, animal and environmental health. This campaign would be similar to the public outreach campaign “Partners for Healthy Pets”, which has elevated public awareness of the value of private practitioners. Such a campaign could be called “Partners for a Healthy Planet”, “Partners for a Healthy Society”, or some such similar title. The resulting review and recommendations for consideration should be provided to each of the contributing organizations prior to the 2019 Annual Meeting of the USAHA and AAVLD.”

The committee appreciated the response from AVMA, and would like to request that USAHA communicate back to AVMA, thanking the AVMA for their consideration of the resolution and their thorough response, and indicating that the committee would be willing to work with AVMA to provide information and “stories” to help with their messaging as requested. It would be helpful to be provided a contact person at AVMA who is working on the issue to be able to do so. In addition, the committee would like to invite an AVMA representative to attend the committee meeting next year, and provide an update on the status of AVMA’s efforts in raising the awareness of veterinarians in public practice. The committee looks forward to working with the AVMA to assist in the effort.