World Organisation for Animal Health

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WOAH Collaborative Centre Reports Activities 2024

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CENTRE INFORMATION

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***Name Director of Institute (Responsible Official):**	Dr. Suelee Robbe-Austerman Director, National Veterinary Services Laboratories USDA , APHIS, VS, DB
***Name (including Title and Position) of Head of the Collaborating Centre (WOAH Contact Point):**	Dr. Suelee Robbe-Austerman Director, National Veterinary Services Laboratories USDA , APHIS, VS, DB
***Name of the writer:**	Dr. Suelee Robbe-Austerman

TOR 1 AND 2: SERVICES PROVIDED

1. Activities as a centre of research, expertise, standardisation and dissemination of techniques within the remit of the mandate given by WOAH

Category	Title of activity	Scope
		Direct diagnostic test methods: PCR, VI,

Diagnosis, biotechnology and laboratory (true)	African Swine Fever (ASF)	and Sequencing. Performed 19,739 Nationally; 229 Internationally Indirect test methods: ELISA, IP, and IFA. Performed 8,587 Nationally Samples were collected from domestic and feral pigs in Dominican Republic (DR) for ASF surveillance Whole genome sequencing was conducted on field specimens from the DR ASF outbreak, information including animal location and testing data were also assembled. Samples were collected from more than 99% swine premises in Puerto Rico and US Virgin Islands for ASF surveillance Organized ASFV qRCR inter-laboratory proficiency tests with non-WOAH Reference Laboratories 656 samples were collected from ASF outbreak in Dominican Republic. 607 were ASFV DNA positive. 202 were sequenced completely, and 405 samples were partially sequenced. Epidemiological data analysis is ongoing.
Diagnosis, biotechnology and laboratory (true)	Avian Influenza (AI)	Direct: RT-PCR (IAV, subtyping), Virus Isolation, Molecular pathotype (Sanger), In vivo pathotype (IVPI), WGS. Performed 78,511 nationally. Indirect: Agar gel immunodiffusion (AGID), Hemagglutination-inhibition (HI) antibody subtype identification (H1-16). Performed 1,606 nationally. Produced/provided reference antigen/antisera, AGID reagents, positive amplification controls, extraction controls, and PT panels to member countries. Proficiency testing rounds for approved-NAHLN laboratories alternate yearly for AI/ND.
Diagnosis, biotechnology and laboratory (true)	Chronic Wasting Disease (CWD)	Direct diagnostic test methods: Immunohistochemistry and Western Blot. Performed 7,104 Nationally. Organized proficiency test to approve domestic partners for testing by IHC.
Diagnosis, biotechnology and laboratory (true)	Contagious equine metritis (CEM)	Direct: Identification of the agent, RT-PCR, and WGS. Performed 3,194 nationally; 138 internationally. Indirect: Complement Fixation. Performed 2232 nationally; 163 internationally. Produced/provided culture control isolates to member countries.

Diagnosis, biotechnology and laboratory (true)	Foot and mouth disease (FMD)	Direct diagnostic test methods: Virus Isolation (VI), Antigen ELISA, PCR, Sequencing. Performed 3,887 Nationally. Indirect diagnostic test methods: 3ABC ELISA, VIAA AGID. Performed 173 Nationally. Supplied PCR Control and BEI inactivated virus for FMDV rRT-PCR
Diagnosis, biotechnology and laboratory (true)	Leptospirosis	Direct diagnostic test methods: Isolation, RT LipL32 PCR, WGS, Serogrouping. Performed 176 Nationally. Indirect diagnostic test method: Microscopic Agglutination. Performed 2,226 Nationally; 76 Internationally. Supplied reference positive and negative control sera, reference cultures, multivalent fluorescent antibody conjugate, and Leptospira medium to WOAH member countries.
Diagnosis, biotechnology and laboratory (true)	Newcastle disease (ND)	Direct: RT-PCR (matrix, fusion), virus isolation, molecular pathotype (Sanger), Invivo pathotype (ICPI), and WGS. Performed 5,288 nationally. Produced/provided reference antigen and antisera, positive amplification controls, extraction controls, and PTs to member countries. Proficiency testing rounds for approved-NAHLN laboratories alternate yearly for AI/ND.
Diagnosis, biotechnology and laboratory (true)	Rinderpest	Diagnostic test methods: PRV RT-PCR, RPV safety, and PPRV safety tests. Performed 51 Nationally. Non-pathogenic proficiency tests panel and controls for RPV and PPRV rRT-PCR stocks produced in the past are still available. Maintained personnel that are proficiency tested in running the RPV rRT-PCR Completed RPV sequencing data analysis and gap filling studies for NGS
Diagnosis, biotechnology and laboratory (true)	Swine influenza (SI)	Direct: RT-PCR (IAV, subtyping), WGS, and repository propagation. Performed 830 Nationally. Indirect: Hemagglutination-inhibition (HI). Performed 12 Nationally. Produced/provided reference antigen and antisera, reference/surveillance viruses, positive amplification controls, and PTs to member countries. Proficiency testing rounds for approved-NAHLN laboratories are offered every other year.

Diagnosis, biotechnology and laboratory (true)	Tuberculosis Mammalian	Direct: Histopathology, Culture and Direct PCR for Livestock/Wildlife/Zoo Species. Performed 42,609 nationally; 10,378 180 internationally Indirect: Interferon-gamma release Assay, Lateral Flow, Agar Gel Immunodiffusion, ELISA, Complement Fixation. Performed 14,893 nationally; 16 internationally. Supplied Mycobacterium antigen – Mycobacterium bovis purified protein derivative Supplied Mycobacterium antigen – purified protein derivative (PPD) avian balanced tuberculin and bovis balanced tuberculin Supplied Mycobacterium bovis direct PCR control, negative, bovine tissue Supplied Mycobacterium bovis direct PCR control, positive, bovine tissue with BCG Supplied Mycobacterium bovis direct PCR control, positive, bovine tissue with Mtb H37a Supplied Mycobacterium bovis serum panel Supplied Mycobacterium species DNA Supplied Mycobacterium reference culture NVSL has implemented a rotational program for veterinarians to increase the depth and capability for tuberculosis diagnostics. NVSL also works to cross train individuals and have individuals complete proficiency testing in the laboratories performing testing for tuberculosis and other closely related diseases. Continue projects relating to mammalian tuberculosis nationally and internationally to grow subject matter experts that could potentially replace WOAH reference experts in the event of loss Participated in proficiency tests with College of American Pathologists Mycobacteriology Survey and Mycobacteriology – Limited Survey (bacterial culture, acid fast stain, and mycobacterial identification). Participated in proficiency tests for Johne's Fecal Organism Detection Proficiency Test – Individual and Pooled (Culture and PCR). Other WOAH members who participated were Canada, Ireland, Scotland, Sweden.
		Direct: Virus isolation, RT-PCR, and sequencing. Performed 309 nationally. Indirect: Competitive enzyme-linked

Diagnosis, biotechnology and laboratory (true)	Vesicular stomatitis virus (VSV)	immunosorbent assay (cELISA; Indiana-1 and New Jersey serotypes), Complement fixation (Indiana-1 and New Jersey serotypes), and Virus Neutralization (Indiana-1 and New Jersey serotypes). Performed 2,958 nationally; 504 internationally.

TOR 3: HARMONISATION OF STANDARDS

2. Proposal or development of any procedure that will facilitate harmonisation of international regulations applicable to the main fucus area for which you were designated

Proposal title	Scope/Content	Applicable Area
ASFV-CRISPR-RPA	Developed	Laboratory Expertise
INgezim® ASFV Combo CROM Ag/Ab Lateral Flow Assay Evaluation	Ongoing, total 398 samples (including experimental and field samples) were evaluated for specificity and sensitivity.	Laboratory Expertise
Aggregated oral fluid sample type for ASFV detection	Ongoing	Laboratory Expertise
Direct RNA FMDV Sequencing	Sequencing of FMDV on the Nanopore platform directly from the viral RNA without the reverse transcription step to reduce time and cost to acquiring the whole genome sequence for characterization.	Laboratory Expertise
FMDV P1 Sequencing	Sequencing of FMDV P1 on Nanopore using Amplicon approach of P1 and Flongle flow cells to reduce cost and time for rapid characterization.	Laboratory Expertise
Interferon gama	Evaluate modernized TB cell mediated immunity tests, including tests that can differentiate infected from vaccinated animals (DIVA) – evaluate the test performance of the Quantiferon Gold Plus in-tube gamma interferon (QFT).	Laboratory Expertise
	Develop assays to detect bovine tuberculosis	

PCR	shedding – evaluate the potential of PCR in milk or mucosal swabs to evaluate shedding.	Laboratory Expertise
ELISA	In process – development of an ELISA for use in detecting tuberculosis in cervids	Laboratory Expertise

3. In exercising your activities, have you identified any regulatory research needs* relevant for WOAH?

No

4. Did your Collaborating Centre maintain a network with other WOAH Collaborating Centres (CC), Reference Laboratories (RL), or organisations designated for the same specialty, to coordinate scientific and technical studies?

Yes

Name of WOAH CC/RL/other organisation(s)	Location	Region of networking Centre	Purpose
Mexico (SAGARPA)	Baja California, Mexico	América	USDA-APHIS SAGARPA project to conduct slaughter surveillance testing in Baja California, Mexico. Samples are split between the laboratories of the USA and Mexico for test harmonization and whole genome sequence database development.
Canada, Ireland, Scotland, Sweden	Canada, Ireland, Scotland, Sweden	América Europa	Participated in proficiency tests for Johne's Fecal Organism Detection Proficiency Test – Individual and Pooled (Culture and PCR).
Global Partnership for Animal and Zoonotic Disease Surveillance (GPAZDS)	The Philippines, Gambia, Ghana, Senegal, Nigeria, Uganda, Cameroon	África Asia y el Pacífico Europa	Sequencing and Bioinformatic analysis, ASF
Central Veterinary Laboratory (LAVECEN)	Dominican Republic	América	Diagnosis and genomic surveillance of ASFV

Pirbright Institute	United Kingdom	Europa	Development of a C-ELISA utilising a recombinant H antigen. Detection of RPV antibodies without the use of RVCM (Searched our inventory and historical experiment data; and identified an antiserum for the leading reference lab for the potential use in validation study).
Leptospirosis Reference Center	The Netherlands	Europa	Serological typing of Leptospiral isolates
USDA ARS National Poultry Center Southeast Poultry Research Laboratory	United States	América	Studies in Poultry Transmission, Airborne Spread and Mitigation Tools for Avian Influenza and Newcastle Disease in the USA
WOAH Reference Laboratories for Animal Influenza	Multiple countries	África América Asia y el Pacífico Europa Oriente Medio	Vesicular Stomatitis Virus Grand Challenge project. Cooperative agreement among APHIS, ARS, and academic partners.
WOAH Reference Laboratories for Vesicular Stomatitis Virus	United States, Mexico	América	Vesicular Stomatitis Virus Grand Challenge project. Cooperative agreement among APHIS, ARS, and academic partners.
Argentina, Chile, Japan, United States	Argentina, Chile, Japan, United States	América Asia y el Pacífico	Proficiency tests for Avian Influenza administered by NVSL and required to conduct official testing in the U.S.; shipped internationally by request. 293 participating laboratories.
		América	Proficiency tests for Newcastle Disease administered by NVSL and

Chile, United States	Chile, United States		required to conduct official testing in the U.S.; shipped internationally by request. 33 participating laboratories
Argentina, Chile, Japan, United States	Argentina, Chile, Japan, United States	América Asia y el Pacífico	Proficiency tests for swine influenza administered by NVSL and required for program participation, shipped internationally by request. 293 participating laboratories.
United States	United States	América	Proficiency tests for VSV administered by NVSL and required to conduct official testing in the U.S., shipped internationally by request. 8 participating laboratories.
United States	United States	América	Proficiency tests for CEM administered by NVSL and required to conduct official testing in the U.S., shipped internationally by request. 19 participating laboratories.

TOR 4 AND 5: NETWORKING AND COLLABORATION

5. Did your Collaborating Centre maintain a network with other WOAH Collaborating Centres, Reference laboratories, or organisations in other disciplines, to coordinate scientific and technical studies?

Yes

Name of WOAH CC/RL/other organisation(s)	Location	Region of networking Centre	Purpose
Research Unit in Applied Microbiology and Pharmacology of natural substances, University of Abomey-Calavi, Abomey-Calavi, Benin	Benin	Africa	Use next-generation sequencing to characterize ASFV samples isolated from the 2023 outbreak in Benin
College of Veterinary Medicine Animal Resources and Bio Security Makerere University,	Uganda	Africa	Use next-generation sequencing to characterize

Kampala, Uganda			ASFV samples from Uganda
Accra Veterinary Laboratory of Veterinary Services Directorate, Accra, Ghana	Ghana	Africa	Use next-generation sequencing to characterize ASFV samples from Ghana
Laboratory for Emerging Infectious Diseases and the Department of Microbiology and Parasitology, University of Buea, Buea, Cameroon	Cameroon	Africa	Use next-generation sequencing to characterize ASFV samples from Cameroon
National Animal Vaccine and Veterinary Countermeasures Bank (NAVVCB)	United States	Americas	FMD Vaccine Potency Test
North American Food and Mouth Disease Vaccine Bank (NAFMDVB) and Canadian Food Inspection Agency	Canada	Americas	FMD Vaccine Potency Test
West Africa Livestock Innovation Centre (WALIC)	Gambia	Africa	Testing apparently healthy indigenous sheep (n=469), goats (n=537) and cattle (n=399) for FMD Abs with ID Screen FMD NSP competition ELISA (Innovative Diagnostics)
Accra Veterinary Laboratory	Ghana	Africa	Tested FMD samples via rRT-PCR, all samples were interpreted as positive and characterized by sequencing. Whole genome and targeted PCR amplicon sequencing was performed.
Animal Disease Diagnostic Department, LEPL State Laboratory of Agriculture	Georgia and Armenia	Asia and Pacific	Evaluating the performance of serotype specific primers and probes in single plex and multiplex assay formats.
			Tested FMD via rRT-PCR, all

Department of Livestock Services, Abuko	Gambia	Africa	samples were interpreted as positive and characterized by sequencing. Whole genome and targeted PCR amplicon sequencing was performed.
PRONABIVE, SENASICA, University of Baja California	Mexico	Americas	To evaluate the efficacy of the Bacille Calmette-Guerin (BCG) vaccination in bTB affected dairy herds.
University of Abuja	Nigeria	Africa	Characterize zoonotic tuberculosis identified in cattle slaughtered in Abuja, Nigera

TOR 6: EXPERT CONSULTANTS

6. Did your Collaborating Centre place expert consultants at the disposal of WOAH?

Yes

Name of expert	Kind of consultancy	Subject
Wei Jia	Virtual review	WOAH Terrestrial Manual: Chapter on Rinderpest

TOR 7: SCIENTIFIC AND TECHNICAL TRAINING

7. Did your Collaborating Centre provide advice/services to requests from Members in your main focus area?

Yes

Provided ASF qPCR diagnostic testing and NGS sequencing for the DR, Benin, Uganda, Ghana, and Cameroon

Provided ASF technical and logistical support to the DR

USDA-APHIS SAGARPA project to conduct slaughter surveillance testing in Baja CA Mexico. Samples are split between the laboratories of USA and Mexico for test harmonization and whole genome sequencing database development. Methods and test comparisons done virtually.

Indonesia requested support in delivering laboratory tuberculosis diagnostic training for animal health laboratories

Germany requested consultation on management of tuberculosis infected large dairy (test and remove model as well as agent characterization).

Nigeria requested support testing formalin fixed paraffin embedded tissue blocks for Mycobacterium tuberculosis complex organisms.

Provided Lepto MAT testing for Curacao, Columbia, Guatemala, and The Netherlands-Aruba

Provided advice to Madagascar regarding Lepto MAT testing

8. Did your Collaborating Centre provide scientific and technical training, within the remit of the mandate given by WOAH, to personnel from WOAH Members?

Yes

a) Technical visit : 1

b) Seminars : 0

c) Hands-on training courses: 5

d) Internships (>1 month) : 0

Type of technical training provided (a, b, c or d)	Content	Country of origin of the expert(s) provided with training	No. participants from the corresponding country
C	Foreign Animal Disease Diagnostician Training Course x 4	United States	100
C	Leptospirosis	United States	24
A	Japan's Ministry of Fisheries and Forestry (MAFF) Delegation interested in how the NVSL organizes interlaboratory proficiency testing as a WOAH Reference Laboratory for avian influenza, vesicular stomatitis, etc. and as a FAO Reference Centre for animal influenza and Newcastle disease etc.	United States	9

TOR 8: SCIENTIFIC MEETINGS

9. Did your Collaborating Centre organise or participate in the organisation of scientific meetings related to your main focus area on behalf of WOAH?

Yes

National/International	Title of event	Co-organiser	Date	Location	No. Participants

Internationally	FMD Reference Lab Network Meeting	WOAH	2024-08-31	Italy	1
Internationally	Rinderpest Virus Holding Facility Network Meeting	WOAH	2023-12-31	UNK	1
Internationally	Rinderpest Virus Holding Facility Network Meeting	WOAH	2024-09-30	UNK	1

TOR 9: DATA AND INFORMATION DISSEMINATION

10. Publication and dissemination of any information within the remit of the mandate given by WOAH that may be useful to Members of WOAH

a) Articles published in peer-reviewed journals:

21

Wu P, McDaniel AJ, Rodríguez YY, Blakemore L, Schumann KR, Chung CJ, Jia W. Evaluation of an in-house indirect immunoperoxidase test for detection of antibodies against African swine fever virus. J Vet Diagn Invest. 2024 Nov;36(6):870-873. doi: 10.1177/10406387241267883. Epub 2024 Sep 6. PMID: 39243119; PMCID: PMC11529064.

Borca MV, Ramirez-Medina E, Espinoza N, Rai A, Spinard E, Velazquez-Salinas L, Valladares A, Silva E, Burton L, Meyers A, Clark J, Wu P, Gay CG, Gladue DP. Deletion of the EP402R Gene from the Genome of African Swine Fever Vaccine Strain ASFV-G-ΔI177L Provides the Potential Capability of Differentiating between Infected and Vaccinated Animals. Viruses. 2024 Feb 28;16(3):376. doi: 10.3390/v16030376. PMID: 38543742; PMCID: PMC10974803.

Das A, Gutkoska J, Tadassa Y, Jia W. Enhanced Recovery and Detection of Highly Infectious Animal Disease Viruses by Virus Capture Using Nanotrap® Microbiome A Particles. Viruses. 2024 Oct 23;16(11):1657. doi: 10.3390/v16111657. PMID: 39599772; PMCID: PMC11599081.

O'Donnell V, Pierce JL, Osipenko O, Xu L, Berninger A, Lakin SM, Barrette RW, Gladue DP, Faburay B. Rapid Detection and Quick Characterization of African Swine Fever Virus Using the VolTRAX Automated Library Preparation Platform. Viruses. 2024 May 5;16(5):731. doi: 10.3390/v16050731. PMID: 38793613; PMCID: PMC11125638.

O'Donnell V, Spinard E, Xu L, Berninger A, Barrette RW, Gladue DP, Faburay B. Full-Length ASFV B646L Gene Sequencing by Nanopore Offers a Simple and Rapid Approach for Identifying ASFV Genotypes. Viruses. 2024 Sep 26;16(10):1522. doi: 10.3390/v16101522. PMID: 39459857; PMCID: PMC11512349.

Faburay, B., Fondzenyuy, Y. A., Ndip, L. M., Acha, J. K., Masalla, T. N., Keneh, N., Esemu, S. N., Spinard, E., Borca, M. V., Xu, L., Berninger, A., O'Donnell, V., & Gladue, D. P. Complete African Swine Fever Virus Genome Isolated from the 2023 Outbreak in Cameroon. Status: Under Review

Direct RNA Sequencing of Foot-and -mouth Disease Virus Genome Using a Flongle on MinION. Xu et al, Jun 20, 2024.

Complete Genome Sequences of twelve Foot-and-Mouth Disease Viruses of Serotype O, Isolated from Cattle in Eastern and Northern Uganda between 2014 and 2017. Ochwo, S.; Ahmed Z.; et al. MRA , under review.

Hamond C, Adam EN, Stone NE, LeCount K, Anderson T, Putz E, Camp P, Hicks J, Stuber T, van der Linden H, Bayles DO, Sahl JW, Schlater

LK, Wagner DM and Nally JE. Identification of equine mares as reservoir hosts for pathogenic species of Leptospira. Front. Vet. Sci. 11:1346713. doi: 10.3389/fvets.2024.1346713(2024)

John Lucas, Diane Holder, Kimberly Dodd, Jia Wei (2020). A versatile dual-use RT-PCR control for use in assays for the detection of peste des petits ruminants virus. J Virol Methods. 2020 Mar:277:113799. doi: 10.1016/j.jviromet.2019.113799. Epub 2019 Dec 16.

Marshall, K. E., Free, R. J., Filardo, T. D., Schwartz, N. G., Hernandez-Romieu, A. C., Thacker, T. C., Lehman, K.A., ... & Basavaraju, S. V. (2024). Incomplete tissue product tracing during an investigation of a tissue-derived tuberculosis outbreak. American Journal of Transplantation, 24(1), 115-122.

Wortham JM, Haddad MB, Stewart RJ, et al. Second Nationwide Tuberculosis Outbreak Caused by Bone Allografts Containing Live Cells — United States, 2023. MMWR Morb Mortal Wkly Rep 2024;72:1385–1389. DOI: http://dx.doi.org/10.15585/mmwr.mm725253a1

Outbreak of Mycobacterium orygis in a Shipment of Cynomolgus Macaques Imported from Southeast Asia — United States, February–May 2023; Samantha D. Swisher, Sara J. Taetzsch, Mark E. Laughlin, William L. Walker, Adam J. Langer, Tyler C. Thacker, Jessica L. Rinsky, Kimberly A. Lehman, Anne Taffe, Nancy Burton, Doris M. Bravo, Emily McDonald, Clive M. Brown, Emily G. Pieracci; MMWR Morb Mortal Wkly Rep 2024;73:145–148; Outbreak of Mycobacterium orygis in a Shipment of Cynomolgus Macaques Imported from Southeast Asia — United States, February–May 2023 | MMWR (cdc.gov)

There was also an article in the American Public Health Association's One Health newsletter "A New Perspective on an Old Vaccine – International Collaboration to Control Bovine Tuberculosis in Northwestern Mexico"

Elsmo EJ, Wünschmann A, Beckmen KB, Broughton-Neiswanger LE, Buckles EL, Ellis J, Fitzgerald SD, Gerlach R, Hawkins S, Ip HS, Lankton JS, Lemley EM, Lenoch JB, Killian ML, Lantz K, Long L, Maes R, Mainenti M, Melotti J, Moriarty ME, Nakagun S, Ruden RM, Shearn-Bochsler V, Thompson D, Torchetti MK, Van Wettere AJ, Wise AG, Lim AL. Highly Pathogenic Avian Influenza A(H5N1) Virus Clade 2.3.4.4b Infections in Wild Terrestrial Mammals, United States, 2022. Emerg Infect Dis. 2023 Dec;29(12):2451-2460. doi: 10.3201/eid2912.230464. PMID: 37987580; PMCID: PMC10683806.

Patyk KA, Fields VL, Beam AL, Branan MA, McGuigan RE, Green A, Torchetti MK, Lantz K, Freifeld A, Marshall K, Delgado AH. Investigation of risk factors for introduction of highly pathogenic avian influenza H5N1 infection among commercial turkey operations in the United States, 2022: a case-control study. Front Vet Sci. 2023 Aug 30;10:1229071. doi: 10.3389/fvets.2023.1229071. Erratum in: Front Vet Sci. 2023 Nov 23;10:1336351. PMID: 37711433; PMCID: PMC10498466.

"Emergence and interstate spread of highly pathogenic avian influenza A(H5N1) in dairy cattle". Thao-Quyen Nguyen, Carl Hutter, Alexey Markin, Megan N Thomas, Kristina Lantz, Mary Lea Killian, Garrett M Janzen, Sriram Vijendran, Sanket Wagle, Blake Inderski, Drew R Magstadt, Ganwu Li, Diego G Diel, Elisha Anne Frye, Kiril M Dimitrov, Amy K Swinford, Alexis C Thompson, Kevin R Snevik, David L Suarez, Erica Spackman, Steven M Lakin, Sara C. Ahola, Kammy R Johnson, Amy L Baker, Suelee Robbe-Austerman, Mia Kim Torchetti, Tavis K Anderson; BioRxIv; doi: https://doi.org/10.1101/2024.05.01.591751; https://www.biorxiv.org/content/10.1101/2024.05.01.591751v1

"Divergent Pathogenesis and Transmission of Highly Pathogenic Avian Influenza A(H5N1) in Swine". Bailey Arruda, Amy L. Vincent Baker, Alexandra Buckley, Tavis K. Anderson, Mia Torchetti, Nichole Hines Bergeson, Mary Lea Killian, and Kristina Lantz. Emerging Infectious Diseases, Volume 30, Number 4-April 2024. https://wwwnc.cdc.gov/eid/article/30/4/23-1141_article

"Surveillance for highly pathogenic avian influenza A (H5N1) in a raptor rehabilitation center – 2022". Victoria Hall, Carol Cardona, Kristelle Mendoza, Mia Torchetti, Kristina Lantz, Irene Bueno, Dana Franzen-Klein. PMC PubMed Central. PLoS One. 2024; 19(4): e0299330. Published online 2024 Apr 29. doi: 10.1371/journal.pone.0299330

Abstract: "Highly pathogenic avian influenza A(H5N1) virus in a common bottlenose dolphin (Tursiops truncatus) in Florida". Allison Murawski, Thomas Fabrizio, Robert Ossiboff, Christina Kackos, Trushar Jeevan, Jeremy C. Jones, Ahmed Kandeil, David Walker, Jasmine C.

M. Turner, Christopher Patton, Elena A. Govorkova, Helena Hauch, Suzanna Mickey, Brittany Barbeau, Y. Reddy Bommineni, Mia Torchetti, Kristina Lantz, Lisa Kercher, Andrew B. Allison, Peter Vogel, Michael Walsh, Richard J. Webby. Communications Biology volume 7, Article number: 476 (2024)

Genome sequence of a vesicular stomatitis Indiana virus isolate collected in 1988 from a naturally infected bovine in Mexico. Steven J. Pauszek, Vivian K. O'Donnell, Bonto Faburay. American Society for Microbiology. https://journals.asm.org/doi/10.1128/mra.00012-24 17 April 2024

b) International conferences:
8
North American African Swine Fever Forum, Ottawa, Canada September 17 - 19, 2024

FMD Reference Laboratory Network Meeting, Rome 2024

EuFMD, Spain 2024

Leptospirosis in United States Zoos. 13th Conference of the International Leptospirosis Society and 4th Meeting of the European Leptospirosis and other rodent-borne haemorrhagic fevers Society, Brussels, Belgium, September 2-4, 2024

Isolation of Leptospira from Cattle in the United States. 13th Conference of the International Leptospirosis Society and 4th Meeting of the European Leptospirosis and other rodent-borne haemorrhagic fevers Society, Brussels, Belgium, September 2-4, 2024.

Epidemiological investigation of leptospirosis in Puerto Rico through hospital active surveillance and community-based animal sampling. 13th Conference of the International Leptospirosis Society and 4th Meeting of the European Leptospirosis and other rodent-borne haemorrhagic fevers Society, Brussels, Belgium, September 2-4, 2024.

Rinderpest Virus Holding Facility Network Meetings January 2024 and October 2024

c) National conferences:
4
ASM Microbe 2024 Conference, Atlanta, Georgia, June 13-17, 2024

US Animal Health Association, American Association of Veterinary Laboratory Diagnosticians, 2024

Biology of Spirochetes Gordon Research Conference, January 2024, Ventura, CA.

Conference of Research Workers in Animal Diseases, January 2024, Chicago, IL.

d) Other (Provide website address or link to appropriate information):
0
N/A

11. What have you done in the past year to advance your area of focus, e.g. updated technology?
N/A

12. Additional comments regarding your report:
Have both Quality and Bio risk Management Systems

The NVSL will be participating in an international lepto proficiency test in 2025 and we will also be producing our own proficiency test in 2025.

Addressed gaps in the Rinderpest virus sequences and finishing up sequencing data analysis

Updated Rinderpest Virus Tracking System in Nov 2024

Lateral flow test numbers are lower than average due to an extended backorder of the test kit from the manufacturer

We want to support WOAH request with providing the training videos we created for diagnostic methods.

NVSL dealing with multiple outbreak responses and were unable to provide WOAH with the TB videos by their deadline of 27 December 2024. We would like to continue to coordinate with WOAH to be able to provide this valuable resource.

We intend to put Dr. Suelee Robbe-Austerman forward as a replacement for Dr. Tyler Thacker as the WOAH Reference Laboratory.