OIE Reference Laboratory Reports Activities

Activities in 2020

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Name of disease (or topic) for which you are a designated OIE Reference Laboratory:	Vesicular stomatitis
Address of laboratory:	USDA, APHIS, Veterinary Services 1920 Dayton Avenue Ames, Iowa 50010 UNITED STATES OF AMERICA
Tel.:	+1 515 337 7551
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E-mail address:	NVSL.DVL.Heads@usda.gov
Website:	www.aphis.usda.gov/nvsl
Name (including Title) of Head of Laboratory (Responsible Official):	Dr. Suelee Robbe-Austerman, Director, National Veterinary Services Laboratories, DB, VS, APHIS, USDA
Name (including Title and Position) of OIE Reference Expert:	Dr. Sabrina Swenson, Diagnostic Virology Laboratory, National Veterinary Services Laboratories, DB, VS, APHIS, USDA
Which of the following defines your laboratory? Check all that apply:	Governmental

ToR 1: To use, promote and disseminate diagnostic methods validated according to OIE Standards

1. Did your laboratory perform diagnostic tests for the specified disease/topic for purposes such as disease diagnosis, screening of animals for export, surveillance, etc.? (Not for quality control, proficiency testing or staff training)

Yes

Diagnostic Test	Indicated in OIE Manual (Yes/No)	Total number of test performed last year	
Indirect diagnostic tests		Nationally	Internationally
Competitive enzyme-linked immunosorbent assay (cELISA; Indiana-1 and New Jersey serotypes)	yes	4,232	402
Complement fixation (Indiana-1 and New Jersey serotypes)	yes	1,470	8
Virus neutralization (Indiana-1 and New Jersey serotypes)	yes	2,600	170
Direct diagnostic tests		Nationally	Internationally
Virus isolation	yes	438	0
Real-time RT-PCR	yes	813	0
Sequencing	no	85	0

ToR 2: To develop reference material in accordance with OIE requirements, and implement and promote the application of OIE Standards.
To store and distribute to national laboratories biological reference products and any other reagents used in the diagnosis and control of the designated pathogens or disease.

2. Did your laboratory produce or supply imported standard reference reagents officially recognised by the OIE?

No

3. Did your laboratory supply standard reference reagents (non OIE-approved) and/or other diagnostic reagents to OIE Member Countries?

Yes

Type of reagent available	Related diagnostic test	Produced/ provide	Amount supplied nationally (ml, mg)	Amount supplied internationally (ml, mg)	No. of recipient OIE Member Countries	Region of recipients
Antigen	CF	Provided	45	0	1	☐Africa ☒Americas ☐Asia and Pacific ☐Europe ☐Middle East
Reference virus	VN	Provided	4	0	1	☐Africa ☒Americas ☐Asia and Pacific ☐Europe ☐Middle East
Recombinant antigen	cELISA	Provided	0	4	1	☐Africa ☐Americas ☒Asia and Pacific ☐Europe ☐Middle East
Polyclonal ascites	cELISA	Provided	0	3	1	☐Africa ☐Americas ☒Asia and Pacific ☐Europe ☐Middle East
Complement	CF	Provided	31	0	1	☐Africa ☒Americas ☐Asia and Pacific ☐Europe ☐Middle East

CF Test Panel	CF	Provided	92	0	1	☐Africa ☒Americas ☐Asia and Pacific ☐Europe ☐Middle East
cELISA Test Panel	cELISA	Provided	30	0	1	☐Africa ☒Americas ☐Asia and Pacific ☐Europe ☐Middle East
PCR Test Panel	PCR	95 mL Produced/provided	95	0	1	☐Africa ☒Americas ☐Asia and Pacific ☐Europe ☐Middle East
Antiserum	several	Provided	196	8	2	☐Africa ☒Americas ☒Asia and Pacific ☐Europe ☐Middle East

4. Did your laboratory produce vaccines?

No

5. Did your laboratory supply vaccines to OIE Member Countries?

No

ToR 3: To develop, standardise and validate, according to OIE Standards, new procedures for diagnosis and control of the designated pathogens or diseases

6. Did your laboratory develop new diagnostic methods validated according to OIE Standards for the designated pathogen or disease?

No

7. Did your laboratory develop new vaccines according to OIE Standards for the designated pathogen or disease?

No

ToR 4: To provide diagnostic testing facilities, and, where appropriate, scientific and technical advice on disease control measures to OIE Member Countries

8. Did your laboratory carry out diagnostic testing for other OIE Member Countries?

No

9. Did your laboratory provide expert advice in technical consultancies on the request of an OIE Member Country?

No

ToR 5: To carry out and/or coordinate scientific and technical studies in collaboration with other laboratories, centres or organisations

10. Did your laboratory participate in international scientific studies in collaboration with OIE Member Countries other than the own?

No

ToR 6: To collect, process, analyse, publish and disseminate epizootiological data relevant to the designated pathogens or diseases

11. Did your Laboratory collect epizootiological data relevant to international disease control?

Yes

If the answer is yes, please provide details of the data collected:
USDA Vesicular Stomatitis: https://www.aphis.usda.gov/aphis/ourfocus/animalhealth/animal-disease-information/cattle-disease-information/vesicular-stomatitis-info

12. Did your laboratory disseminate epizootiological data that had been processed and analysed?

Yes

If the answer is yes, please provide details of the data collected:
USDA Vesicular Stomatitis: https://www.aphis.usda.gov/aphis/ourfocus/animalhealth/animal-disease-information/cattle-disease-information/vesicular-stomatitis-info

13. What method of dissemination of information is most often used by your laboratory? (Indicate in the appropriate box the number by category)

a) Articles published in peer-reviewed journals: 2

b) International conferences: 4

c) National conferences: 1
October 2020: VIRTUAL United States Animal Health Association and American Association of Veterinary Laboratory Diagnosticians Annual Meeting

d) Other:
(Provide website address or link to appropriate information) 3
NVSL works with another unit within USDA for distribution of analyzed data. USDA Vesicular Stomatitis: https://www.aphis.usda.gov/aphis/ourfocus/animalhealth/animal-disease-information/cattle-disease-information/vesicular-stomatitis-info

ToR 7: To provide scientific and technical training for personnel from OIE Member Countries
To recommend the prescribed and alternative tests or vaccines as OIE Standards

14. Did your laboratory provide scientific and technical training to laboratory personnel from other OIE Member Countries?

No

ToR 8: To maintain a system of quality assurance, biosafety and biosecurity relevant for the pathogen and the disease concerned

15. Does your laboratory have a Quality Management System?

Yes

Quality management system adopted	Certificate scan (PDF, JPG, PNG format)
ISO 17025 Biological Testing	2020 A2LA Accreditation Certificate.pdf

16. Is your quality management system accredited?

Yes

Test for which your laboratory is accredited	Accreditation body
Virus neutralization	American Association for Laboratory Accreditation (A2LA)
Complement fixation	A2LA
Competitive enzyme-linked immunosorbent assay (cELISA)	A2LA
Virus isolation	A2LA

17. Does your laboratory maintain a “biorisk management system” for the pathogen and the disease concerned?

Yes

(See Manual of Diagnostic Tests and Vaccines for Terrestrial Animals, Chapter 1.1.4)

ToR 9: To organise and participate in scientific meetings on behalf of the OIE

18. Did your laboratory organise scientific meetings on behalf of the OIE?

No

19. Did your laboratory participate in scientific meetings on behalf of the OIE?

No

ToR 10: To establish and maintain a network with other OIE Reference Laboratories designated for the same pathogen or disease and organise regular inter-laboratory proficiency testing to ensure comparability of results

20. Did your laboratory exchange information with other OIE Reference Laboratories designated for the same pathogen or disease?

No

21. Was your laboratory involved in maintaining a network with OIE Reference Laboratories designated for the same pathogen or disease by organising or participating in proficiency tests?

No

22. Did your laboratory collaborate with other OIE Reference Laboratories for the same disease on scientific research projects for the diagnosis or control of the pathogen of interest?

No

ToR 11: To organise inter-laboratory proficiency testing with laboratories other than OIE Reference Laboratories for the same pathogens and diseases to ensure equivalence of results

23. Did your laboratory organise or participate in inter-laboratory proficiency tests with laboratories other than OIE Reference Laboratories for the same disease?

Yes

Note: See Interlaboratory test comparisons in: Laboratory Proficiency Testing at: http://www.oie.int/en/our-scientific-expertise/reference-laboratories/proficiency-testing see point 1.3

Purpose for inter-laboratory test comparisons[1]	No. participating laboratories	Region(s) of participating OIE Member Countries
Administered by NVSL and required to conduct official testing in the U.S.; shipped internationally by request	10	☐Africa ☒Americas ☐Asia and Pacific ☐Europe ☐Middle East

ToR 12: To place expert consultants at the disposal of the OIE

24. Did your laboratory place expert consultants at the disposal of the OIE?

No

25. Additional comments regarding your report:

The Diagnostic Virology Laboratory of the National Veterinary Services Laboratories is undergoing restructuring and will be identifying new subject matter experts. The COVID-19 pandemic has impacted national and international laboratory activities and sample receipt.
There was a VSV outbreak in the U.S. which began on April 13, 2020, and closed on November 13, 2020. Both VSV-Indiana 1 (VSV-IND1) and VSV-New Jersey (VSV-NJ) serotypes were identified during the 2020 outbreak. VSV-IND1 occurred in the U.S. in 2019, while VSV-NJ was last isolated in the U.S. in the 2014-2015 outbreak. Both serotypes are known to circulate in endemic cycles in southern Mexico. The last U.S. outbreak involving both serotypes occurred in 1997-1998. For more information on this outbreak, see the situation reports at: https://www.aphis.usda.gov/aphis/ourfocus/animalhealth/animal-disease-information/cattle-disease-information/vsv-reports