OIE Reference Laboratory Reports Activities

Activities in 2020

This report has been submitted : 2021-01-13 14:35:28

Name of disease (or topic) for which you are a designated OIE Reference Laboratory:	Lumpy skin disease
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Website:	https://www.pirbright.ac.uk/our-science/vector-borne-viral-diseases/non-vesicular-disease-reference-laboratory
Name (including Title) of Head of Laboratory (Responsible Official):	Dr Bryan Charleston
Name (including Title and Position) of OIE Reference Expert:	Dr Pip Beard, Group leader Large DNA viruses
Which of the following defines your laboratory? Check all that apply:	Academic

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
ELISA	Yes	0	2
Direct diagnostic tests		Nationally	Internationally
Real-Time PCR	Yes	0	34
Differentiation PCR	No	0	34
VI	Yes	0	4

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
LSDV positive serum	ELISA	Provide	0	11ml	4	☐Africa ☐Americas ☒Asia and Pacific ☐Europe ☒Middle East
LSDV DNA	PCR	Provide	0	300ul	3	☐Africa ☐Americas ☒Asia and Pacific ☐Europe ☐Middle East
LSDV (Egypt strain)	PCR	Provide	0	1ml	1	☐Africa ☐Americas ☐Asia and Pacific ☒Europe ☐Middle East
LSDV (Neethling strain)	PCR	Provide	0	2ml	1	☐Africa ☐Americas ☒Asia and Pacific ☐Europe ☐Middle East
LSDV (Cameroon strain)	PCR	Provide	0	100ul	1	☐Africa ☐Americas ☐Asia and Pacific ☒Europe ☐Middle East

LSDV (Cameroon strain)inactivated	ELISA development	Provide	0	1ml	1	☐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?

Yes

Name of OIE Member Country seeking assistance	Date (month)	No. samples received for provision of diagnostic support	No. samples received for provision of confirmatory diagnoses
CHINA (PEOPLE'S REP. OF)	November; samples from Hong Kong	14	0
SRI LANKA	December	22	0

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

Yes

Name of the OIE Member Country receiving a technical consultancy	Purpose	How the advice was provided
NEPAL	Diagnostic test selection	E mail
VIETNAM	Virus propagation techniques	E mail
CZECH REPUBLIC	Virus isolates	E mail
PHILIPPINES	Diagnostic test selection	E mail
SINGAPORE	Diagnostic test selection	E mail

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?

Yes

Title of the study	Duration	Purpose of the study	Partners (Institutions)	OIE Member Countries involved other than your country
Research contract CRP32032: Veterinary Diagnostic Laboratory Network (VETLAB Network) to prevent and control transboundary animal diseases (TADs)	5 Years	Develop validated reagents, build capacity for diagnosis	ANSES, CIRAD. CSIRO, SENASA, Pirbright, LANAVET, CVI, LANADA, UKIM, ONNSA, NAHDIC, IAEA	ARGENTINA AUSTRALIA AUSTRIA CAMEROON COTE D'IVOIRE CROATIA ETHIOPIA FRANCE MOROCCO NORTH MACEDONIA (REP. OF) SUDAN
Addressing the dual emerging threats of African Swine Fever and Lumpy Skin Disease in Europe (DEFEND)	5 Years	To control the growing LSD and ASF epidemics in Europe and neighbouring countries by understanding the drivers of LSDV and ASFV emergence, and by generating research outputs which underpin novel diagnostic tools and vaccines, and authenticate appropriate and rapid responses by decision-makers.	The Pirbright Institute, Sciensano, The Friedrich Loeffler Institute (FLI) Sveriges Lantbruksuniversitet (SLU) Istituto Zooprofilattico Sperimentale Della Lombardia ed Emilia Romagna (IZSLER) Agricultural Research Council (ARC) Istituto Universitario Europeo (MPC) Veterinarians san Frontieres International (SIVtro VSF ITALIA) Kimron Veterinary Institute (KIMRON) ZOETIS IDVet Klifovet AG University of Pretoria (UP) Canadian Food Inspection Agency (CFIA) CSIRO Ministry of Rural Development and Food (MINAGRIC) Athens Veterinary Centre (AVC) The Jenner Institute for Vaccine Research, University of Oxford (UOXF) State Food and Veterinary Service (SFVS) Republican Veterinary Laboratory (RVL) FGI Federal Centre for Animal Health (FGI ARRIAH) Ministry of Agriculture, Rural Development and Water Management (MINA) Diagnostic Veterinary Laboratory (DVL) Institute for Diagnosis and Animal Health (IDAH) Central Veterinary Authority (ANSVSA) Bulgarian Food Safety Agency (BFSA) Ministry of Agriculture and Food (MAF) SS. Cyril and Methodius University Skopje (SSU) Istanbul University (IU) Ministry of Food Agriculture and Livestock (MFAL) Istituto Superiore per la Protezione e la Ricerca Ambientale (ISPRA) Veterinary Specialized institute Kraljevo (VSI-K) Scientific Veterinary Institute Novi Sad (NIV-NS)	ALBANIA AUSTRALIA AZERBAIJAN BELGIUM BULGARIA CANADA FRANCE GERMANY GREECE ISRAEL ITALY LITHUANIA MONTENEGRO NORTH MACEDONIA (REP. OF) ROMANIA RUSSIA SERBIA SOUTH AFRICA SPAIN SWEDEN TURKEY UNITED KINGDOM

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:
Studies into the epidemiology of lumpy skin disease in Nigeria were carried out.

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:
Data was disseminated via two publications (listed below).

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
Epidemiological Characteristics and Economic Impact of Lumpy Skin Disease, Sheeppox and Goatpox Among Subsistence Farmers in Northeast Nigeria.
Limon G, Gamawa AA, Ahmed AI, Lyons NA, Beard PM. Front Vet Sci. 2020 Jan 29;7:8. doi: 10.3389/fvets.2020.00008

Risk Factors for Outbreaks of Lumpy Skin Disease and the Economic Impact in Cattle Farms of Nakuru County, Kenya.
Kiplagat SK, Kitala PM, Onono JO, Beard PM, Lyons NA. Front Vet Sci. 2020 May 29;7:259. doi: 10.3389/fvets.2020.00259.

b) International conferences: 0

c) National conferences: 0

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

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/IEC17025	UKAS cert.pdf

16. Is your quality management system accredited?

Yes

Test for which your laboratory is accredited	Accreditation body
Real-time PCR	UKAS
ELISA	UKAS

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?

Yes

Title of event	Date (mm/yy)	Location	Role (speaker, presenting poster, short communications)	Title of the work presented
OIE Regional Laboratory Consultation Meeting for Asia and the Pacific	09/20	remote via video conference	Speaker	Diagnosis of LSDV
OIE Regional General Consultation Meeting for Asia and the Pacific	09/20	remote via video conference	Participant	n/a
Lumpy Skin Disease - Regional situation update.	12/20	emote via rvideo conference	Participant	n/a

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?

Yes

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?

Yes

Title of the project or contract	Scope	Name(s) of relevant OIE Reference Laboratories
Addressing the dual emerging threats of African Swine Fever and Lumpy Skin Disease in Europe (DEFEND)	To control the growing LSD and ASF epidemics in Europe and neighbouring countries by understanding the drivers of LSDV and ASFV emergence, and by generating research outputs which underpin novel diagnostic tools and vaccines, and authenticate appropriate and rapid responses by decision-makers.	South Africa - ARC (Agricultural Research Council)

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
The aim of this PT was to evaluate the ability of the participating laboratories to identify the absence or presence of antibodies to capripox viruses in serum of bovidae origin and/or to assess the diagnostic capability of the participating laboratories to detect capripox (CAPX) virus nucleic acid in samples containing material for CAPX virus molecular diagnostic.	38	☐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:

“Question 8: Samples submitted from the Peoples Republic of China originate from Hong Kong.

Due to the SARS-CoV-2 pandemic and the related travel restrictions, no training courses could be hosted at The Pirbright Institute nor could in country training be delivered.

The Pirbright Institute have offered support for the development of a PT scheme for Capripox virus diagnosis including Lumpy skin disease virus for the South East Asia region.”