

WOAH Reference Laboratory Reports Activities 2023

Activities in 2023

This report has been submitted : 29 avril 2024 12:38

Laboratory Information

Name of disease (or topic) for which you are a designated WOAHO Reference Laboratory:	Lumpy skin disease virus
Address of laboratory:	Groeselenberg 99, 1180 Uccle
Tel.:	+3223790627
E-mail address:	nick.deregge@sciensano.be
Website:	https://www.sciensano.be/en
Name (including Title) of Head of Laboratory (Responsible Official):	Head of service Exotic and vector-borne diseases
Name (including Title and Position) of WOAHO Reference Expert:	Head of service Exotic and vector-borne diseases
Which of the following defines your laboratory? Check all that apply:	Governmental Research agency

TOR1: DIAGNOSTIC METHODS

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 WOAHO Manual (Yes/No)	Total number of test performed last year	
		Nationally	Internationally
Indirect diagnostic tests		Nationally	Internationally
Direct diagnostic tests		Nationally	Internationally
real time pan-capripox PCR		0	50

TOR2: REFERENCE MATERIAL

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

No

3. Did your laboratory supply standard reference reagents (nonWOAHO-approved) and/or other diagnostic reagents to WOAHO Members?

Yes

TYPE OF REAGENT AVAILABLE	RELATED DIAGNOSTIC TEST	PRODUCED/ PROVIDE	AMOUNT SUPPLIED NATIONALLY (ML, MG)	AMOUNT SUPPLIED INTERNATIONALLY (ML, MG)	NO. OF RECIPIENT WOAHO MEMBER COUNTRIES	COUNTRY OF RECIPIENTS
inactivated tissue homogenate containing clade 1.2 LSDV strain	real time PCR	in our BSL3 laboratory from samples from experimentally infected animals	0	2 ml	1	THAILAND,

4. Did your laboratory produce vaccines?

No

5. Did your laboratory supply vaccines to WOAHO Members?

No

TOR3: NEW PROCEDURES

6. Did your laboratory develop new diagnostic methods for the designated pathogen or disease?

Yes

NAME OF THE NEW TEST OR DIAGNOSTIC METHOD DEVELOPED	DESCRIPTION AND REFERENCES (PUBLICATION, WEBSITE, ETC.)
DIVA realtime PCR to distinguish wild type LSDV (clade 1.2 and 2) from neethling based LSDV vaccine	Development and Validation of a New DIVA Real-Time PCR Allowing to Differentiate Wild-Type Lumpy Skin Disease Virus Strains, Including the Asian Recombinant Strains, from Neethling-Based Vaccine Strains. Haegeman A, De Leeuw I, Philips W, De Regge N. Viruses. 2023 Mar 28;15(4):870. doi: 10.3390/v15040870. PMID: 37112850

7. Did your laboratory validate diagnostic methods according to WOAHP Standards for the designated pathogen or disease?

No

8. Did your laboratory develop new vaccines for the designated pathogen or disease?

No

9. Did your laboratory validate vaccines according to WOAHP Standards for the designated pathogen or disease?

No

TOR4: DIAGNOSTIC TESTING FACILITIES

10. Did your laboratory carry out diagnostic testing for other WOAHP Members?

No

11. Did your laboratory provide expert advice in technical consultancies on the request of an WOAHP Member?

Yes

NAME OF THE WOAHP MEMBER COUNTRY RECEIVING A TECHNICAL CONSULTANCY	PURPOSE	HOW THE ADVICE WAS PROVIDED
ITALY	discussion about the development and usefulness of LFDs for LSDV	online meeting
SPAIN	capripox virus isolation	online meeting

TOR5: COLLABORATIVE SCIENTIFIC AND TECHNICAL STUDIES

12. Did your laboratory participate in international scientific studies in collaboration with WOAHP Members other than the own?

Yes

Title of the study	Duration	PURPOSE OF THE STUDY	PARTNERS (INSTITUTIONS)	WOAHP MEMBER COUNTRIES INVOLVED OTHER THAN YOUR COUNTRY
H2020 - Defend project: tackle the emergence of African swine fever and lumpy skin disease in European livestock.	2018-2023	learn more about LSDV persistence and transmission, develop new diagnostic tools and vaccines	Pirbright, FLI, reference laboratories from Balkan countries	ALBANIA BOSNIA AND HERZEGOVINA BULGARIA ESTONIA GERMANY MONTENEGRO SLOVAKIA SOUTH AFRICA UNITED KINGDOM

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

Yes

Research need : 1

Please type the Research need: lack of DIVA vaccines

Relevance for WOAHP Disease Control,

Relevance for the Codes or Manual Manual,

Field Vaccines,

Animal Category Terrestrial,

Disease:

Lumpy skin disease

Kind of disease (Zoonosis, Transboundary diseases) Transboundary diseases,

If any, please specify relevance for Codes or Manual, chapter and title

(e.g. Terrestrial Manual Chapter 2.3.5 - Minimum requirements for aseptic production in vaccine manufacture)

Answer: chapter 3.4.12 Lumpy skin disease

Notes:

Answer:

TOR6: EPIZOOLOGICAL DATA

14. Did your Laboratory collect epidemiological data relevant to international disease control?

Yes

IF THE ANSWER IS YES, PLEASE PROVIDE DETAILS OF THE DATA COLLECTED:

detection and characterization of LSDV strains present in Nigeria

15. Did your laboratory disseminate epidemiological data that had been processed and analysed?

No

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

a) Articles published in peer-reviewed journals:

4

Lumpy Skin Disease Virus Genome Sequence Analysis: Putative Spatio-Temporal Epidemiology, Single Gene versus Whole Genome Phylogeny and Genomic Evolution.

Bremner FC, Haegeman A, Krešić N, Philips W, De Regge N.

Viruses. 2023 Jun 28;15(7):1471. doi: 10.3390/v15071471.

PMID: 37515159

*Evidence of Lumpy Skin Disease Virus Transmission from Subclinically Infected Cattle by *Stomoxys calcitrans*.*

Haegeman A, Sohler C, Mostin L, De Leeuw I, Van Campe W, Philips W, De Regge N, De Clercq K.

Viruses. 2023 May 30;15(6):1285. doi: 10.3390/v15061285.

PMID: 37376585

Development and Validation of a New DIVA Real-Time PCR Allowing to Differentiate Wild-Type Lumpy Skin Disease Virus Strains, Including the Asian Recombinant Strains, from Neethling-Based Vaccine Strains.

Haegeman A, De Leeuw I, Philips W, De Regge N.

Viruses. 2023 Mar 28;15(4):870. doi: 10.3390/v15040870.

PMID: 37112850

Duration of Immunity Induced after Vaccination of Cattle with a Live Attenuated or Inactivated Lumpy Skin Disease Virus Vaccine.

Haegeman A, De Leeuw I, Mostin L, Van Campe W, Philips W, Elharrak M, De Regge N, De Clercq K.

Microorganisms. 2023 Jan 13;11(1):210. doi: 10.3390/microorganisms11010210.

PMID: 36677502

b) International conferences:

13

multiple international meeting in the context of GFTAD, WOAHA central Asia, WOAHA south Asia, WOAHA south-east Asia, EuFMD, other scientific congresses

c) National conferences:

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

TOR7: SCIENTIFIC AND TECHNICAL TRAINING

17. Did your laboratory provide scientific and technical training to laboratory personnel from other WOA H Members?

Yes

a) Technical visit : 0

b) Seminars : 3

c) Hands-on training courses: 2

d) Internships (>1 month) 0

Type of technical training provided (a, b, c or d)	Country of origin of the expert(s) provided with training	No. participants from the corresponding country
C	ALGERIA	2
B	AFGHANISTAN	50
B	BELGIUM	30
B	AFGHANISTAN	150

TOR8: QUALITY ASSURANCE

18. Does your laboratory have a Quality Management System?

Yes

Quality management system adopted	Certificate scan (PDF, JPG, PNG format)	
ISO17025	see document	081_test_iso_17025certificat_daccreditation_-_accreditatiecertificaat_belac_iso_170251301-04-20224_au-tot_30-09-2024.pdf
ISO17043	see document	081_pt_iso_17043certificat_daccreditation_-_accreditatiecertificaat_belac_iso_17043901-04-2024_au-tot_30-09-2024.pdf

19. Is your quality management system accredited?

Yes

Test for which your laboratory is accredited	Accreditation body
LSDV capripox PCR; LSDV isolation; LSDV ELISA	BELAC, ISO17025, ISO17043

20. Does your laboratory maintain a "biorisk management system" for the pathogen and the disease concerned?

Yes

Contained use approval for work with capripox viruses under BSL3 conditions from the 'Leefmilieu Brussel'

TOR9: SCIENTIFIC MEETINGS

21. Did your laboratory organise scientific meetings related to the pathogen in question on behalf of WOA H?

No

22. Did your laboratory participate in scientific meetings related to the pathogen in question on behalf of WOA H?

Yes

Title of event	Date (mm/yy)	Location	Role (speaker, presenting poster, short communications)	Title of the work presented
GFTAD SGE LSDV Europe	2023-02-03	online	speaker	LSDV epidemiology in Asia and work of the EURL
GFTAD South-Asia, transboundary animal diseases	2023-09-05	Bhutan	speaker	Impact of LSDV recombinant strains; LSDV vaccine quality control and vaccinatio/challenger experiments at Sciensano; overview of LSDV diagnostic methods
workshop on transboundary animal diseases Greece	2023-02-10	online	speaker	Introduction to LSDV and SPPV

WOAH/FAO ASEAN coordination meeting	2023-02-11	Bangkok	speaker	overview LSDV diagnostic techniques; overview of LSDV vaccines and vaccine quality control
WOAH subregional representation for central Asia: seminar on LSDV	2023-12-12	online	speaker	update on LSDV diagnostic techniques; production of quality LSDV vaccines

TOR10: NETWORK WITH WOAHP REFERENCE LABORATORIES

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

Yes

24. Do you network (collaborate or share information) with other WOAHP Reference Laboratories designated for the same pathogen?

Yes

NETWORK/DISEASE	ROLE OF YOUR LABORATORY (PARTICIPANT, ORGANISER, ETC)	NO. PARTICIPANTS	PARTICIPATING WOAHP REF. LABS
LSDV	participant	4	Pirbright

25. Did you organise or participate in inter-laboratory proficiency tests with WOAHP Reference Laboratories designated for the same pathogen?

Yes

PURPOSE OF THE PROFICIENCY TESTS: 1	ROLE OF YOUR REFERENCE LABORATORY (ORGANISER/ PARTICIPANT)	NO. PARTICIPANTS	PARTICIPATING WOAHP REF. LABS/ ORGANISING WOAHP REF. LAB.
LSDV serology and virology	organiser	45	WOAHP RL LSDV Pirbright

26. Did your laboratory collaborate with other WOAHP 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 WOAHP REFERENCE LABORATORIES
H2020-Defend	Increase knowledge on LSDV persistence and transmission; develop new tools for LSDV diagnosis and vaccination	WOAHP RL Pirbright

TOR11: OTHER INTERLABORATORY PROFICIENCY TESTING

27. Did your laboratory organise or participate in inter-laboratory proficiency tests with laboratories other than WOAHP Reference Laboratories for the same pathogen?

Yes

Purpose for inter-laboratory test comparisons ¹	Role of your reference laboratory (organizer/participant)	No. participating laboratories	Name of the Test	WOAHP Member Countries
LSDV serology and virology	organiser	45	LSDV ELISA, LSDV IPMA; LSDV PCR	AUSTRALIA, AUSTRIA, BELGIUM, BOSNIA AND HERZEGOVINA, BULGARIA, CROATIA, CYPRUS, CZECH REPUBLIC, DENMARK, ESTONIA, FINLAND, FRANCE, GEORGIA, GERMANY, GREECE, HUNGARY, IRELAND, ITALY, KAZAKHSTAN, KOREA (DEM. PEOPLE'S. REP. OF), KOSOVO, LITHUANIA, LUXEMBOURG, MOLDOVA, MONTENEGRO, NORTH MACEDONIA (REP. OF), NORWAY, POLAND, PORTUGAL, ROMANIA, SERBIA, SLOVAKIA, SLOVENIA, SPAIN, SWEDEN, SWITZERLAND, THE NETHERLANDS, TURKEY, UKRAINE, UNITED KINGDOM,

TOR12: EXPERT CONSULTANTS

28. Did your laboratory place expert consultants at the disposal of WOAHP?

Yes

KIND OF CONSULTANCY	Location	SUBJECT (FACULTATIVE)
revision of LSDV chapter in the manual - paragraph		

wildlife and part vaccines	online	LSDV
specific technical question related to LSDV and zoonosis	online	LSDV
advisory committee on ASEAN LSDV control strategy	Bangkok	LSDV
specific question to review script for LSDV videos on vaccination and diagnostics	online	LSDV

29. Additional comments regarding your report:

No