

# OIE Reference Laboratory Reports Activities

## *Activities in 2021*

**This report has been submitted : 2022-01-13 14:02:56**

<b>Name of disease (or topic) for which you are a designated OIE Reference Laboratory:</b>	Lumpy skin disease
<b>Address of laboratory:</b>	Agricultural Research Council-Onderstepoort Veterinary Institute Private Bag X05 Onderstepoort 0110 SOUTH AFRICA
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<b>Name (including Title) of Head of Laboratory (Responsible Official):</b>	Dr Misheck Mulumba
<b>Name (including Title and Position) of OIE Reference Expert:</b>	Dr David Wallace, Senior Researcher
<b>Which of the following defines your laboratory? Check all that apply:</b>	Governmental Research 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	
		Nationally	Internationally
Indirect diagnostic tests		Nationally	Internationally
VNT (SNT variation)	Yes	364	0
Direct diagnostic tests		Nationally	Internationally
PCR	Yes	90	5

**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?

No

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
NAMIBIA	June	0	5

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
SOUTH AFRICA	Evaluation of LSD vaccine batches for local manufacturer	A report was submitted to the manufacturer detailing the results obtained.

**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
Horizon2020-DEFEND: Addressing the dual emerging threats of ASF and LSD in Europe.	5 years, with 6 month extension	To investigate all important aspects of LSD (and, ASF) to help mitigate the risks to Europe (primarily, but in effect, globally)	The Pirbright Institute (UK), Sciensano (Belgium) and 24 others.	AUSTRALIA AZERBAIJAN BELGIUM BOSNIA AND HERZEGOVINA BULGARIA CANADA FRANCE GERMANY GREECE ISRAEL ITALY MONTENEGRO NORTH MACEDONIA (REP. OF) SERBIA SLOVENIA 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:

New field isolates were collected and historic isolates of LSDV were sequenced and compared to vaccine and virulent field isolate genomes in GenBank, with relevance to vaccine stability in the field, of special international relevance due to appearance of recombinants strains in the field (publication available online)

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:

Sequences were produced and submitted for inclusion in GenBank - and, presented as part of publication, training course and congress (details to follow)

**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: 1

Van Schalkwyk, A., Byadovskaya, O., Shumilova, I., Wallace, D.B. and Sprygin, A. 2021. Estimating evolutionary changes between highly passaged and original parental lumpy skin disease virus strains. Trans Emerg. Dis. DOI:10.1111/tbed.14326

b) International conferences: 2

van Schalkwyk, A., Kara, P., Ebersohn, K., Mather, A., Annandale, H., Venter, E.H. and Wallace, D.B. 2021. Estimating evolutionary changes between lumpy skin disease virus strains from South Africa. 2020 / 2021 XXIII International Poxvirus, Asfarvirus and Iridovirus conference (virtual). July 5 – 9 2021. Philadelphia, Pennsylvania, USA (hosting site)

Wallace, D.B., Mather, A., Pretorius, A. and Kara, P. Lumpy skin disease virus: a versatile vaccine delivery vector. NBAF Scientific Symposium, Next Generation Vaccines, 28 April 2021.

c) National conferences: 0

d) Other:

(Provide website address or link to appropriate information) 1

Wallace, D.B., van Schalkwyk, A., Mather, A., Kara, P and Lubisi, A. Lumpy Skin Disease: History, Lessons and Perspectives (2021). Presentation by Dr Wallace as invited expert participant in FAO online LSD training course for SADC, 3 February to 3 March 2021 (Dr Wallace also participated in answering trainees' questions throughout the course and participated in closing webinar on 3rd March)

Assisted with compilation of FAQ answers for OIE Sub-Regional presentation for South-East Asia, July 2021

**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?

Yes

a) Technical visits: 0

b) Seminars: 20

c) Hands-on training courses: 0

d) Internships (&gt;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
b	Turkey	20

**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	Certificate_SANAS Accred 2019_from Chris on 6Jan20.pdf
ISO 17025	Accreditation certificate_OVI_2020_DWessels_on 13Jan22.pdf

16. Is your quality management system accredited?

Yes

Test for which your laboratory is accredited	Accreditation body
(yes, for other diseases, but, none for LSD-specific tests currently accredited)	SANAS (Department Agriculture, Land Reform and Rural Development approval pending)

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
SADC Reference Centre's consultative virtual meeting	12/21	Online	Expert participant	Did not present a talk, but participated in discussions etc.

**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
Enhancing Research For Africa Network (ERFAN)	Providing and discussing scientific inputs on LSD with other SADC laboratories, via the network.	IZSAM (Italy)
H2020-DEFEND (ASF and LSD)	An EU-funded project covering all aspects of diagnosis, epidemiology and control - OVI is study lead on work package 9.3, now on LSD vaccine effectiveness in South Africa. Sequence data shared with other labs as part of the project.	The Pirbright Institute (UK) and SCIENSANO (Belgium)

**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?

No

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

**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?

Yes

Kind of consultancy	Location	Subject (facultative)
Report on LSDV recombinants in the field	online	Concern over appearance of LSDV recombinants in the field in Russia, SE Asia etc.

25. Additional comments regarding your report:

A number of requests are being received from countries in Asia for reference reagents for assisting with diagnosis etc. of LSD - however, due to some political sensitivities and the need for MTAs etc. for material transfer, the process is extremely slow.