WOAH Reference Laboratory Reports Activities 2023
Activities in 2023
This report has been submitted: 11 juin 2024 06:43

**Laboratory Information**

| Name of disease (or topic) for which you are a designated WOAH Reference Laboratory: | Lumpy skin disease |
| Address of laboratory: | Agricultural Research Council - Onderstepoort Veterinary Institute, 100 Old Soutpan Road, Onderstepoort |
| TeI: | +27125299108 |
| E-mail address: | vanschalkwyka1@arc.agric.za |
| Website: | www.arc.agric.za |
| Name (including Title) of Head of Laboratory (Responsible Official): | Dr. Arshad Mather, Acting Senior Manager: Animal Health And Protection |
| Name (including Title and Position) of WOAH Reference Expert: | Dr. Antoinette van Schalkwyk, Senior Researcher |
| Which of the following defines your laboratory? Check all that apply: | 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

<table>
<thead>
<tr>
<th>Diagnostic Test</th>
<th>Indicated in WOAH Manual (Yes/No)</th>
<th>Total number of test performed last year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indirect diagnostic tests</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VNT</td>
<td>Yes</td>
<td>Nationally: 89</td>
</tr>
<tr>
<td>Direct diagnostic tests</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PCR</td>
<td>Yes</td>
<td>Nationally: 92</td>
</tr>
</tbody>
</table>

**TOR2: REFERENCE MATERIAL**

2. Did your laboratory produce or supply imported standard reference reagents officially recognised by WOAH?
   - No
3. Did your laboratory supply standard reference reagents (non-WOAH-approved) and/or other diagnostic reagents to WOAH Members?
   - No
4. Did your laboratory produce vaccines?
   - No
5. Did your laboratory supply vaccines to WOAH 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**


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

**NAME OF THE NEW VACCINE DEVELOPED**

| Vaccine batch testing for Onderstepoort Biological Product SOC Ltd. Batches: 482, 483 and 484 | Onderstepoort Biological Products SOC Ltd Private Bag X07 Onderstepoort 0110 South Africa www.obpvaccines.co.za |
| Vaccine seed strain identification: Complete genome sequencing of their Neethling vaccine | Federal Centre for Animal Health (FGBI, ARRIAH), Vladimir, Russia |

**TOR4: DIAGNOSTIC TESTING FACILITIES**

10. Did your laboratory carry out diagnostic testing for other WOAH Members?  
No

11. Did your laboratory provide expert advice in technical consultancies on the request of an WOAH Member?  
No

**TOR5: COLLABORATIVE SCIENTIFIC AND TECHNICAL STUDIES**

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

<table>
<thead>
<tr>
<th>Title of the study</th>
<th>Duration</th>
<th>PURPOSE OF THE STUDY</th>
<th>PARTNERS (INSTITUTIONS)</th>
<th>WOAH MEMBER COUNTRIES INVOLVED OTHER THAN YOUR COUNTRY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sequencing of recombinant LSDV strains in Russia</td>
<td>Since 2018</td>
<td>To characterize the novel recombinant LSD strains circulating in Russia</td>
<td>Federal Centre for Animal Health (FGBI, ARRIAH), Vladimir, Russia</td>
<td>RUSSIA</td>
</tr>
</tbody>
</table>

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

**Research need : 1**

Please type the Research need: Updates were made to Chapter 3.4.12 Lumpy skin disease for the twelfth edition of the WOAH Manual of Diagnostic Tests and Vaccines for Terrestrial Animals, to include the relevant information on the novel recombinant strains in the northern hemisphere (Reference Letter: GT/SL/GP 35.580, 26 June 2023).

Relevance for WOAH Disease Control,
Relevance for the Codes or Manual Manual,
Field Epidemiology and Surveillance, Diagnostics,
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:

We continued to collect, isolate and characterize new field isolates through complete genome sequencing and phylogenetically comparing them with sequences from GenBank. This is of importance for the stability determination of the viral genome in light of the concerns associated with the recombinants detected in the field in the northern hemisphere. Characterization of historic isolate are also continuing, for the same reasons. Besides cattle, isolates were also characterised from wildlife, such as springbok antelope.

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

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

Review of the genetically different LSDV strains identified since 1954.

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:

3


b) International conferences:

2


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

van Schalkwyk. A. 2023. Knopvelsiekte wat onder vee voorkom. 7 February 2023. RSG radio station. https://clyp.it/g0ehhnz


**TOR7: SCIENTIFIC AND TECHNICAL TRAINING**

17. Did your laboratory provide scientific and technical training to laboratory personnel from other WOAH Members?
Yes
a) Technical visit : 0
b) Seminars : 0
c) Hands-on training courses: 2
d) Internships (>1 month) : 0

<table>
<thead>
<tr>
<th>Type of technical training provided (a, b, c or d)</th>
<th>Country of origin of the expert(s) provided with training</th>
<th>No. participants from the corresponding country</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>RUSSIA</td>
<td>2</td>
</tr>
</tbody>
</table>

**TOR8: QUALITY ASSURANCE**

18. Does your laboratory have a Quality Management System?
Yes

<table>
<thead>
<tr>
<th>Quality management system adopted</th>
<th>Certificate scan (PDF, JPG, PNG format)</th>
</tr>
</thead>
</table>

19. Is your quality management system accredited?
Yes

<table>
<thead>
<tr>
<th>Test for which your laboratory is accredited</th>
<th>Accreditation body</th>
</tr>
</thead>
<tbody>
<tr>
<td>Various diseases listed in the attached document, but currently not for LSD. The LSD test are performed in the same laboratories under the same accreditation system</td>
<td>South African National Accreditation System (SANAS)</td>
</tr>
</tbody>
</table>

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

We have been following the recommendations as set out in the Terrestrial Manual.

**TOR9: SCIENTIFIC MEETINGS**

21. Did your laboratory organise scientific meetings related to the pathogen in question on behalf of WOAH?
No

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

<table>
<thead>
<tr>
<th>Title of event</th>
<th>Date (mm/yy)</th>
<th>Location</th>
<th>Role (speaker, presenting poster, short communications)</th>
<th>Title of the work presented</th>
</tr>
</thead>
<tbody>
<tr>
<td>East Asia CVO/Contact Persons meeting on PPR &amp; LSD</td>
<td>2023-07-25</td>
<td>Qingdao, China</td>
<td>Van Schalkwyk presented three talks</td>
<td>1. Updates to WOAH Manual Chapter 3.4.12 2. Diagnostics of LSD 3. Vaccines of LSD</td>
</tr>
</tbody>
</table>

**TOR10: NETWORK WITH WOAH REFERENCE LABORATORIES**
23. Did your laboratory exchange information with other WOAH Reference Laboratories designated for the same pathogen or disease?
No

24. Do you network (collaborate or share information) with other WOAH Reference Laboratories designated for the same pathogen?
No

25. Did you organise or participate in inter-laboratory proficiency tests with WOAH Reference Laboratories designated for the same pathogen?
No

26. Did your laboratory collaborate with other WOAH Reference Laboratories for the same disease on scientific research projects for the diagnosis or control of the pathogen of interest?
No

**TOR11: OTHER INTERLABORATORY PROFICIENCY TESTING**

27. Did your laboratory organise or participate in inter-laboratory proficiency tests with laboratories other than WOAH Reference Laboratories for the same pathogen?
No

**TOR12: EXPERT CONSULTANTS**

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

<table>
<thead>
<tr>
<th>KIND OF CONSULTANCY</th>
<th>Location</th>
<th>SUBJECT (FACULTATIVE)</th>
</tr>
</thead>
</table>

29. Additional comments regarding your report:
No