WOAH Reference Laboratory Reports Activities 2023
Activities in 2023
This report has been submitted: 1 juillet 2024 18:41

Laboratory Information

| Name of disease (or topic) for which you are a designated WOAH Reference Laboratory: | Rift valley fever |
| Address of laboratory: | No. 100 Old Soutpan Road, Onderstepoort, 0110, Gauteng Province, South Africa |
| Tel: | +27-12 529 91 17 |
| E-mail address: | LubisiA@arc.agric.za |
| Website: | https://www.arc.agric.za/ |
| Name (including Title) of Head of Laboratory (Responsible Official): | Dr. Arshad Mather - Acting Senior Manager Research: Animal Health and Protection |
| Name (including Title and Position) of WOAH Reference Expert: | Dr. Baratang Alison Lubisi - Research Team Manager: Diagnostic Services |
| Which of the following defines your laboratory? Check all that apply: | Governmental |

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 tests performed last year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indirect diagnostic tests</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indirect IgG ELISA</td>
<td>Yes</td>
<td>Nationally: 720</td>
</tr>
<tr>
<td>Capture IgM ELISA</td>
<td>Yes</td>
<td>Nationally: 720</td>
</tr>
<tr>
<td>Direct diagnostic tests</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Real Time RT-PCR</td>
<td></td>
<td>Nationally: 91</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?
   Not applicable

5. Did your laboratory supply vaccines to WOAH Members?
   Not applicable

TOR3: NEW PROCEDURES

6. Did your laboratory develop new diagnostic methods for the designated pathogen or disease?
   No
### NAME OF THE NEW TEST OR DIAGNOSTIC METHOD DEVELOPED

<table>
<thead>
<tr>
<th>RVF Inhibition ELISA</th>
</tr>
</thead>
</table>

#### DESCRIPTION AND REFERENCES (PUBLICATION, WEBSITE, ETC.)

An inhibition ELISA to detect antibodies to Rift Valley fever virus (RVFV) in sera of infected or vaccinated animals was developed. The test is based on a recombinant RVFV N protein and a recombinant single chain antibody (scFv F3) specific for this protein. These reagents are well characterised and renewable. Antibodies in animal sera can inhibit the binding of scFv F3 to the N protein. This year, pre-coated plates were tested and shown to be stable for up to 15 months thus far using Stabilcoat as stabiliser/blocker. The scFv on the other hand, can only be stored frozen for 9 months. Freeze drying of the scFv is going to be tested next for a longer storage option. Sera (540) previously tested with the NICD ELISA were tested with the inhibition ELISA and the results must be compared with those of the virus neutralisation test (VNT) for statistical analyses. Full validation of the test is planned for next year.

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?

No

#### TOR4: DIAGNOSTIC TESTING FACILITIES

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

Yes

<table>
<thead>
<tr>
<th>NAME OF WOAH MEMBER COUNTRY SEEKING ASSISTANCE</th>
<th>DATE</th>
<th>WHICH DIAGNOSTIC TEST USED</th>
<th>NO. SAMPLES RECEIVED FOR PROVISION OF DIAGNOSTIC SUPPORT</th>
<th>NO. SAMPLES RECEIVED FOR PROVISION OF CONFIRMATORY DIAGNOSES</th>
</tr>
</thead>
<tbody>
<tr>
<td>NAMIBIA</td>
<td>2023-08-18</td>
<td>Indirect IgG ELISA Capture IgM ELISA</td>
<td>3</td>
<td>0</td>
</tr>
</tbody>
</table>

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?

No

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

No

#### 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:**

Sera were tested to determine Rift valley fever seropositivity and seroprevalence in different susceptible species.

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:**

A scientific paper was published in a peer reviewed journal. Presentations were made at international conferences and research stakeholder meetings.
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:


b) International conferences:

25th Regional Commission for Africa Conference, Gaborone, Botswana, 20 – 24 February 2023

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 WOAH Members?

No

**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>
<tbody>
<tr>
<td>ISO 17025</td>
<td>SANAS Certificate</td>
</tr>
<tr>
<td></td>
<td>SANAS Certificate V0001 - December 2023.pdf</td>
</tr>
</tbody>
</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>Indirect IgG ELISA</td>
<td>South African National Accreditation System (SANAS)</td>
</tr>
<tr>
<td>Capture IgM ELISA</td>
<td>South African National Accreditation System (SANAS)</td>
</tr>
<tr>
<td>qRT-PCR</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

The laboratory adheres to good laboratory practices and has standard operating procedures (SOPs) and fit for purpose equipment and facilities to ensure biosecurity, biosafety, and biocontainment of pathogens.

**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?
No

**TOR10: NETWORK WITH WOAH REFERENCE LABORATORIES**

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

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

<table>
<thead>
<tr>
<th>NETWORK/DISEASE</th>
<th>ROLE OF YOUR LABORATORY (PARTICIPANT, ORGANISER, ETC)</th>
<th>NO. PARTICIPANTS</th>
<th>PARTICIPATING WOAH REF. LABS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rift valley fever</td>
<td>Participant</td>
<td>16</td>
<td>French Agricultural Research Centre for International Development (CIRAD)</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>PURPOSE OF THE PROFICIENCY TESTS</th>
<th>ROLE OF YOUR REFERENCE LABORATORY (ORGANISER/ PARTICIPANT)</th>
<th>NO. PARTICIPANTS</th>
<th>PARTICIPATING WOAH REF. LABS/ ORGANISING WOAH REF. LAB.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality assurance of Rift valley fever diagnostic tests</td>
<td>Participant</td>
<td>16</td>
<td>French Agricultural Research Centre for International Development (CIRAD)</td>
</tr>
</tbody>
</table>

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?
No

29. Additional comments regarding your report:
Yes

The laboratory receives few international samples for Rift valley fever diagnostic purposes. A plea was made to the Southern African Development Community (SADC) through the WOAH Sub-Regional Representation for Southern Africa, for veterinary officials to submit samples for diagnostic purposes. The request also extended to research organisations for collaboration on the disease.

The Pendik Veterinary Control Institute (PVCI) in Istanbul, TÜRKİYE, expressed interest to enter into a twinning project on Rift valley fever with ARC-OVR. The proposal was accepted by WOAH, and the project will commence once funding is obtained.