

OIE Reference Laboratory Reports Activities

Activities in 2019

This report has been submitted : 2020-01-22 12:37:21

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|--|--|
| Name of disease (or topic) for which you are a designated OIE Reference Laboratory: | Rift Valley fever |
| Address of laboratory: | Agricultural Research Council Private Bag X05 Onderstepoort 0110 SOUTH AFRICA |
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| Name (including Title) of Head of Laboratory (Responsible Official): | Dr. Misheck Mulumba |
| Name (including Title and Position) of OIE Reference Expert: | Dr. Baratang Alison Lubisi |
| Which of the following defines your laboratory? Check all that apply: | Governmental |

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 |
| IgG ELISA | Yes | 839 | 0 |
| IgM ELISA | Yes | 839 | 0 |
| Direct diagnostic tests | | Nationally | Internationally |
| Virus isolation | Yes | 0 | 0 |
| qRT-PCR | Yes | 149 | 0 |

**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?

No

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

No

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 |
|---|----------|-----------------------------|--|---|
| Reducing the Threat of Rift Valley Fever through Ecology, Epidemiology and SocioEconomics | 2 years | To reduce the threat of RVF | EcoHealth Alliance; Department of Agriculture, Forestry and Fisheries (DAFF); Provincial Veterinary Departments - South Africa; National Institute for Communicable diseases (NICD); University of Pretoria;SANParks | UNITED STATES OF AMERICA |

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: |
|--|
| 1. Laboratory test results of animals tested for diagnostic and export purposes. 2. Research data (molecular epidemiological and sero-prevalence information). |

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: |
|--|
| 1. Laboratory test results of animals tested for diagnostic and export purposes. 2. Research data (molecular epidemiological and sero-prevalence information). |

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: 4

1. van Schalkwyk A, Romito M, 2019. Genomic Characterization of Rift Valley Fever Virus, South Africa, 2018. *Emerg Infect Dis.* 2019 Oct;25(10):1979-1981. doi: 10.3201/eid2510.181748.

2. Lubisi BA, Ndouvhada PN, Neiffer D, Penrith ML, Sibanda DR, Bastos A., 2019. Seroprevalence of Rift valley fever in South African domestic and wild suids (1999-2016). *Transbound Emerg Dis.* 2019 Oct 26. doi: 10.1111/tbed.13402.

3. Lubisi BA, Ndouvhada PN, Neiffer D, Penrith ML, Sibanda DR, Bastos ADS., 2019. Evaluation of a Virus Neutralisation Test for Detection of Rift Valley Fever Antibodies in Suid Sera. *Trop Med Infect Dis.* 2019 Mar 25;4(1). pii: E52. doi: 10.3390/tropicalmed4010052.

4. Maluleke MR, Phosiwa M, van Schalkwyk A, Michuki G, Lubisi BA, Kegakilwe PS, Kemp SJ, Majiwa PAO., 2019. A comparative genome analysis of Rift Valley Fever virus isolates from foci of the disease outbreak in South Africa in 2008-2010. *PLoS Negl Trop Dis.* 2019 Mar 21;13(3):e0006576. doi: 10.1371/journal.pntd.0006576

b) International conferences: 0

c) National conferences: 0

d) Other:

(Provide website address or link to appropriate information) 0

Students:

Ndouvhada, P. N. Optimisation and validation of Rift valley fever indirect IgG ELISA for use in porcine sera and plasma. Msc degree registered with the University of South Africa. Supervisor - Donald-Ray Sibanda and co-supervisor - Baratang Alison Lubisi

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) |
|-----------------------------------|---|
| ISO17025 | SANAS Accreditation 2017-2022 pdf.pdf |
| ISO17025 | DAFF Approval 2019 - PCR.pdf |

16. Is your quality management system accredited?

Yes

| Test for which your laboratory is accredited | Accreditation body |
|--|--------------------|
| IgG ELISA | SANAS |
| IgM ELISA | SANAS |
| rRT-PCR | DAFF |

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?

No

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?

No

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?

No

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 |
|--|--------------------------------|---|
| Serological test harmonisation | 3 | <input checked="" type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input type="checkbox"/> Europe <input type="checkbox"/> 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:

None