This report has been submitted: 2015-01-16 09:58:25

<table>
<thead>
<tr>
<th>Name of disease (or topic) for which you are a designated OIE Reference Laboratory:</th>
<th>Rabies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address of laboratory:</td>
<td>Onderstepoort Veterinary Institute Rabies Unit Private Bag X05 Onderstepoort 0110 SOUTH AFRICA</td>
</tr>
<tr>
<td>Tel.:</td>
<td>+27-12 529 94 39</td>
</tr>
<tr>
<td>Fax:</td>
<td>+27-12 529 93 90</td>
</tr>
<tr>
<td>E-mail address:</td>
<td><a href="mailto:sabetac@arc.agric.za">sabetac@arc.agric.za</a></td>
</tr>
<tr>
<td>Website:</td>
<td><a href="http://www.arc.agric.za">www.arc.agric.za</a></td>
</tr>
<tr>
<td>Name (including Title) of Head of Laboratory (Responsible Official):</td>
<td>Claude Taurai Sabeta</td>
</tr>
<tr>
<td>Name (including Title and Position) of OIE Reference Expert:</td>
<td>Claude Taurai Sabeta</td>
</tr>
<tr>
<td>Which of the following defines your laboratory? Check all that apply:</td>
<td>Research</td>
</tr>
</tbody>
</table>
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

<table>
<thead>
<tr>
<th>Diagnostic Test</th>
<th>Indicated in OIE Manual (Yes/No)</th>
<th>Total number of test performed last year</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Nationally</td>
<td>Internationally</td>
</tr>
<tr>
<td>Indirect diagnostic tests</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monoclonal antibody typing</td>
<td>Yes</td>
<td>98</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Direct diagnostic tests</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fluorescent antibody test (FAT)</td>
<td>Yes</td>
<td>882</td>
</tr>
<tr>
<td></td>
<td></td>
<td>22</td>
</tr>
<tr>
<td>Fluorescent antibody virus neutralisation test (FAVNT)</td>
<td>Yes</td>
<td>3919</td>
</tr>
<tr>
<td></td>
<td></td>
<td>560</td>
</tr>
</tbody>
</table>

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?

   Yes
<table>
<thead>
<tr>
<th>Type of reagent available</th>
<th>Related diagnostic test</th>
<th>Produced/ provide</th>
<th>Amount supplied nationally (ml, mg)</th>
<th>Amount supplied internationally (ml, mg)</th>
<th>No. of recipient OIE Member Countries</th>
<th>Region of recipients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fluorescein isothiocyanate labeled biological conjugate</td>
<td>Both FAT and FAVNT</td>
<td>Produced and provided</td>
<td>1 ml</td>
<td>7 ml</td>
<td>6</td>
<td>Africa, Americas, Asia and Pacific, Europe, Middle East</td>
</tr>
</tbody>
</table>

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 | February, July & October | 21 | 21 |
ZIMBABWE | October | 1 | 1 |

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 |
--- | --- | --- |
CAMEROON | Technical backstopping mission on the FAT | On site visit and training |
CONGO (DEM. REP. OF THE) | Technical backstopping mission on the FAT | On site visit and training |
CONGO (REP. OF THE) | Technical backstopping mission on the FAT | On site visit and training |
UGANDA | Technical backstopping mission on the FAT | On site visit and training |
RWANDA | Technical backstopping mission on the FAT | On site visit and training |

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) |
--- | --- | --- | --- |
First international collaborative study for the serological detection of fox and raccoon dog rabies antibodies as part of oral vaccination programme evaluation. | 3 months | The main objective of this collaborative study coordinated by the ANSES-Nancy was to assess the technical performances of the BioPro ELISA kit to determine if this kit could be used in European countries as a reliable method for rabies serological testing of field samples collected for the monitoring of ORV. | OIE Rabies Reference Laboratory (France)and 26 other international laboratories |
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

12. Did your laboratory disseminate epizootiological data that had been processed and analysed?
Yes

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

b) International conferences: 0
c) National conferences: 1
The Agricultural Research Council is a member of the South African National Rabies Advisory Group which meets once a year. Trends of rabies cases and biotypes are presented during these meetings.
d) Other:
(Provide website address or link to appropriate information) 2
1. The Department of Agriculture Fisheries and Forestry is informed of all the positive cases as soon as they are confirmed[www.daff.gov.za].

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 certified according to an International Standard?  
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>V0003SANAS.pdf</td>
</tr>
</tbody>
</table>

16. Is your laboratory accredited by an international accreditation body?  
Yes

<table>
<thead>
<tr>
<th>Test for which your laboratory is accredited</th>
<th>Accreditation body</th>
</tr>
</thead>
<tbody>
<tr>
<td>FAT</td>
<td>SANAS</td>
</tr>
<tr>
<td>FAVNT</td>
<td>SANAS</td>
</tr>
</tbody>
</table>

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 2014, Chapter 1.1.3a)*

**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
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?

Yes

<table>
<thead>
<tr>
<th>Purpose of the proficiency tests: ¹</th>
<th>Role of your Reference Laboratory (organiser/participant)</th>
<th>No. participants</th>
<th>Participating OIE Ref. Labs/organising OIE Ref. Lab.</th>
</tr>
</thead>
<tbody>
<tr>
<td>To assess the competence of rabies national veterinary laboratories on diagnosing rabies in selected Congo Basin and Southern African Development Community Countries.</td>
<td>Organiser</td>
<td>12</td>
<td>Onderstepoort Veterinary Institute</td>
</tr>
</tbody>
</table>

¹ validation of a diagnostic protocol: specify the test; quality control of vaccines: specify the vaccine type, etc.

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
Rabies in the African civet - an incidental host for lyssaviruses

Nucleotide sequencing of the glycoprotein and nucleoprotein genes of viruses in our respective archives followed by genetic analysis

OIE Rabies Reference Laboratory at the Animal and Plant Health Agency (UK).

Full genome sequencing of dog viruses

Full genome sequencing of viral ribonucleic acid.

OIE Rabies Reference Laboratory at the Animal and Plant Health Agency (UK).

A comparison of the direct rapid immunohistochemical test (dRIT) with the FAT

Mini validation of the dRIT test

OIE Rabies Reference Laboratories (Canada, UK, Germany and France)

4. Exposure of lyssaviruses in bat species in Plateau and Bauchi States in Nigeria

Survey for lyssavirus antibodies in bat species

the National Veterinary Research Institute (Nigeria)

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

<table>
<thead>
<tr>
<th>Purpose for inter-laboratory test comparisons¹</th>
<th>No. participating laboratories</th>
<th>Region(s) of participating OIE Member Countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fitness for purpose for the FAT</td>
<td>50</td>
<td>☐Africa ☐Americas ☐Asia and Pacific ☐Europe ☐Middle East</td>
</tr>
<tr>
<td>Fitness for purpose for the FAVNT</td>
<td>59</td>
<td>☐Africa ☐Americas ☐Asia and Pacific ☐Europe ☐Middle East</td>
</tr>
</tbody>
</table>

¹Fitness for purpose for the FAT and FAVNT
**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:

The backstopping missions undertaken by the OIE Rabies Reference Laboratory in the selected Congo Basin demonstrated the gaps that still exist in rabies diagnosis occurring in most laboratories throughout the continent. The information should be utilized and extrapolated to other laboratories so that the standards are similar in these laboratories.