

WOAH Reference Laboratory Reports Activities 2022

Activities in 2022

This report has been submitted : 25 avril 2023 16:41

Laboratory Information

Name of disease (or topic) for which you are a designated WOA Reference Laboratory:	Rabies
Address of laboratory:	WOAH Rabies Reference Laboratory, Onderstepoort Veterinary Institute, Onderstepoort 0110, Republic of South Africa.
Tel.:	+27125299439
E-mail address:	claudesabeta@up.ac.za
Website:	www.arc.agric.za
Name (including Title) of Head of Laboratory (Responsible Official):	Dr Munangatire Mparamoto
Name (including Title and Position) of WOA Reference Expert:	Dr Claude Sabeta
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

Diagnostic Test	Indicated in WOA Manual (Yes/No)	Total number of test performed last year	
Indirect diagnostic tests		Nationally	Internationally
Monoclonal antibody typing	No	10	0
Direct diagnostic tests		Nationally	Internationally
Direct fluorescent antibody test	Yes	335	0
Polymerase chain reaction	Yes	61	0

Fluorescent antibody virus neutralisation test	Yes	4476	456
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TOR2: REFERENCE MATERIAL

2. Did your laboratory produce or supply imported standard reference reagents officially recognised by WOA?H?

No

3. Did your laboratory supply standard reference reagents (nonWOAH-approved) and/or other diagnostic reagents to WOA?H Members?

No

4. Did your laboratory produce vaccines?

No

5. Did your laboratory supply vaccines to WOA?H Members?

No

TOR3: NEW PROCEDURES

6. Did your laboratory develop new diagnostic methods for the designated pathogen or disease?

No

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

No

TOR4: DIAGNOSTIC TESTING FACILITIES

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

No

11. Did your laboratory provide expert advice in technical consultancies on the request of an WOA?H Member?

No

TOR5: COLLABORATIVE SCIENTIFIC AND TECHNICAL STUDIES

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

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:

Through the national surveillance for rabies, data for animal samples tested for rabies was included in the rabies database for 2022.

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:

All the data collected in 2022 on rabies positive and negative samples was shared with the Department of Agriculture, Land Reform and Rural Development weekly.

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:

1. Ngoepe, E., Chirima JG., Mohale D., Mogano K., Toru Suzuki, Makita K. and Sabeta, C.T. (2022) Rabies outbreak in black-backed jackals (*Canis mesomelas*), South Africa, 2016. *Epidemiology and Infection*. Doi: 10.1017/s0950268821002685. 2. Veronica O. Ameh, George J. Chirima, Melvyn Quan and Claude T. Sabeta. (2022) Public Health Awareness on Bats and Their Disease Carrying Potential among Bat Handlers and Persons Residing Near Bat Roosts in Makurdi, Nigeria. *Pathogens*. 11(9):975. doi: 10.3390/pathogens11090975. PMID: 36145407; PMCID: PMC9505307. 3. Mapatse, M., Sabeta, C., Abernethy, D. and Fafetine, J. (2022) Knowledge Attitudes and Practices (KAPs) of rabies among households and healthcare practitioners at the Human-wildlife interface in Limpopo National Park, Massingir District, Mozambique. *PLoS Neglected Tropical Diseases* 16(3): e0010202. DOI:10.1371/journal.pntd.0010202 4. Malan, A.J., Coetzer, A., Sabeta, C.T. and Nel, L.H. (2022) Epidemiological interface of sylvatic and dog rabies in the North West province of South Africa. *Tropical Medicine and Infectious Diseases*. 7, 90. <https://doi.org/10.3390/7tropicalmed7060090>. 5. Mogano K., Suzuki T., Mohale D., Phahladira B., Ngoepe E., Kamata Y., Chirima G., Sabeta C. and Makita K. (2022) Spatio-temporal epidemiology of animal and human rabies in northern South Africa in 1998-2017. *Plos Neglected Tropical Diseases*. DOI: 10.1371/journal.pntd.0010464. 6. Milton Mapatse, Ernest Ngoepe, Darrel Abernethy, José Manuel Fafetine, Iolanda Anahory and Claude Sabeta. (2022) Seroprevalence of rabies in dogs in Limpopo National Park and phylogeny of rabies viruses in Mozambique. *Pathogens*. 11(9):1043. doi: 10.3390/pathogens11091043. PMID: 36145475; PMCID: PMC9506193.

One way of communicating data for rabies research and diagnosis. During the year under review, the reference laboratory published 6 manuscripts in international journals.

b) International conferences:

None attended but two presentations made during WOAHA webinars.

c) National conferences:

Two

Attended the Southern African Society for Veterinary Epidemiology and Preventive Medicine (SASVEPM Conference), 24-26 August, 2022, and presented the following as a poster: ii. Miyen, M.J., Lopez, L. and Sabeta C.T. A serological assessment of rabies-neutralising

antibodies in wildlife species to facilitate international movement (poster) and i. Mokano, K., Suzuki T., Mohale D., Phahladira B., Ngoepe E., Kamata Y., Chirima G., Sabeta C. and Makita K. Spatio-temporal epidemiology of animal and human rabies in northern South Africa during 1998-2017 as an oral.

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

www.dalrrd.gov.za

TOR7: SCIENTIFIC AND TECHNICAL TRAINING

17. Did your laboratory provide scientific and technical training to laboratory personnel from other WOAHA Members?

TOR8: QUALITY ASSURANCE

18. Does your laboratory have a Quality Management System?

Yes

Quality management system adopted	Certificate scan (PDF, JPG, PNG format)	
ISO17025	pdf	V0003-11-2022.pdf

19. Is your quality management system accredited?

Yes

Test for which your laboratory is accredited	Accreditation body
Direct fluorescent antibody test	South African National Accrediting System (SANAS)
Fluorescent antibody virus neutralisation tests	SANAS

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

Yes

Biorisk is now considered a key practice in testing laboratories and was incorporated into our quality system (since 2019) and is co-ordinated by the Quality Representative of the organisation.

TOR9: SCIENTIFIC MEETINGS

21. Did your laboratory organise scientific meetings related to the pathogen in question on behalf of WOAHA?

No

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

Yes

Title of event	Date (mm/yy)	Location	Role (speaker, presenting poster, short communications)	Title of the work presented
Africa Rabies Webinar	2022-09-27	Virtual	Speaker	Laboratory diagnostics for rabies

TOR10: NETWORK WITH WOAHP REFERENCE LABORATORIES

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

Yes

24. Are you a member of a network of WOAHP Reference Laboratories designated for the same pathogen?

Yes

PURPOSE OF THE PROFICIENCY TESTS: 1	ROLE OF YOUR REFERENCE LABORATORY (ORGANISER/ PARTICIPANT)	NO. PARTICIPANTS	PARTICIPATING WOAHP REF. LABS/ ORGANISING WOAHP REF. LAB.
Rabies network	Member	12	Has been a member of the network since 2021

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

No

26. Did your laboratory collaborate with other WOAHP 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 WOAHP Reference Laboratories for the same pathogen?

Yes

Purpose for inter-laboratory test comparisons ¹	Role of your reference laboratory (organizer/participant)	No. participating laboratories	Region(s) of participating WOAHP Member Countries
Inter-laboratory comparisons	Exchange of samples with the Allerton Provincial Laboratory	2	Africa

TOR12: EXPERT CONSULTANTS

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

No

29. Additional comments regarding your report:

Yes

The Reference Laboratory at Onderstepoort was also involved in two capacity development projects, one a twinning project between the ARC (South Africa) and Animal Health Institute (AHI, Ethiopia) and ii. Establishing core cells for a future South African rabies laboratory network involving (Malawi, Lesotho, Esawatini, Mozambique and Zimbabwe and Eritrea. The second project is being done in collaboration with the FLI (Germany) who are carrying the same activities in Botswana, Angola, Namibia and Zambia.